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**Folder Title:**  
Climate Change Budget/Finance FY2001 Appropriations [1]

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| <b>Stack:</b> | <b>Row:</b> | <b>Section:</b> | <b>Shelf:</b> | <b>Position:</b> |
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# International Clean Energy Initiative

To accelerate the development and deployment of clean energy technologies around the world, President Clinton is proposing the Clean Energy for the 21<sup>st</sup> Century: International Initiative – a \$200 million multi-agency effort (a more than 100 percent increase over FY 2000 enacted levels) to encourage open competitive markets and remove market barriers to clean energy technologies in developing and transition countries and to provide new incentives for clean energy technology innovation and export. This initiative will promote U.S. exports and create high-value jobs, and will assist countries power their economic development while fighting air pollution and climate change.

***Window of Opportunity for America and the World.*** Developing country energy use will overtake that of industrial countries by 2020. These energy technology markets are projected to total \$4 to \$5 trillion over the next 20 years and \$15 to \$25 trillion over the next 50 years. Developing country energy use is expected to account for three-fourths of the increase in global energy use between now and 2050.

Advanced, low-polluting energy technologies can provide these energy services efficiently, but existing markets often do not value these benefits. In addition, environmentally superior options often carry higher up-front costs, may be unfamiliar, or are perceived as more risky by decision-makers in developing countries. The initiative builds on a recent set of recommendations by the President's Committee of Advisors on Science and Technology (PCAST) and is directed at leveling the playing field between cleaner U.S. energy technologies and services and polluting alternatives.

***Real Benefits At Home and Abroad.*** The initiative will help lay the technical and policy foundation that will allow developing and transition countries to build a clean energy future, leapfrogging past the polluting energy technologies used by the industrial countries, while building competitive markets open to U.S. firms. The goals of this initiative include:

- Doubling clean energy technology exports by 2005, creating as much as \$5 billion in new export revenues for U.S. companies and as many as 100,000 new U.S. jobs.
- Cutting energy use in targeted country buildings and appliances in half through advanced building design tools and building equipment codes and standards.
- Developing integrated renewable energy technologies that have the potential to power the full range of energy services for the 2 billion people in developing countries that do not now have electricity.
- Sharply reducing sulfur, particulate, and greenhouse gas emissions by developing advanced coal-fired power plants and low-cost hydrogen fuels.
- Maximizing use of combined heat & power systems through technical and policy assistance.

- Reducing transition and developing country methane emissions from pipelines and other fossil sources by an amount equal to 100 million metric tons of carbon per year by 2005.
- Providing technical and policy support to encourage the development of natural gas grids.
- Reducing energy use in the industrial sector through the introduction of best practice methods, including advanced sensors and controls, and energy efficient motor drive systems.
- Conducting research in nuclear energy to address cost, waste, safety, and proliferation concerns.

***Initiative Structure.*** This initiative will streamline current bureaucratic procedures to better assist U.S. firms wishing to invest in clean energy projects in developing and transition countries. In so doing, it will encourage public-private partnerships with foreign counterparts to demonstrate clean energy technologies, drive down their cost, and facilitate private sector financing for their large-scale deployment. It will also encourage open, competitive markets while protecting public interests. The initiative will employ a range of proven policy tools, including U.S. technical and policy assistance to developing countries through personnel exchanges, conducting collaborative R&D with key foreign research groups, developing integrated renewable energy, energy efficiency, and advanced fossil energy technologies and pilot projects, and providing a range of trade supports to expand clean energy exports.

The initiative's requested \$103 million increase for these activities includes an additional \$49 million for activities at the Department of Energy; \$30 million for the U.S. Agency for International Development; \$15 million for the Export-Import Bank; \$5 million for the Trade and Development Agency; and, \$4 million for the Department of Commerce.

# President Clinton's FY 2001 Climate Change Budget

*"The greatest environmental challenge of the new century is global warming . . . If we fail to reduce the emission of greenhouse gases, deadly heat waves and droughts will become more frequent, coastal areas will flood, and economies will be disrupted. That is going to happen, unless we act. Many people . . . still believe you cannot cut greenhouse gas emissions without slowing economic growth. In the Industrial Age that may well have been true. But in this digital economy, it is not true anymore. New technologies make it possible to cut harmful emissions and provide even more growth."*

-- President Bill Clinton, State of the Union Address, January 27, 2000

**Meeting the Challenge of Global Warming.** Against a backdrop of growing scientific consensus that the Earth is warming – and that human activities are at least partly to blame – President Clinton's FY 2001 budget is proposing \$2.4 billion (a 43 percent increase over FY 2000 enacted levels) in funding to combat global climate change. This includes a series of new initiatives, such as accelerated efforts to develop clean energy sources both at home and abroad and a new Clean Air Partnership Fund to boost state and local efforts to reduce greenhouse gases and air pollution, as well as a five-year package of tax incentives to spur clean energy technologies and increased investment for R&D in energy efficient technology and renewable energy. In addition, the President is proposing more than \$1.7 billion for global change research, for a total package for FY 2001 of over \$4 billion.

**International Clean Energy Initiative.** To help accelerate the development and deployment of clean energy technologies around the world, President Clinton is proposing \$201 million (a more than 100 percent increase over FY 2000 enacted levels) for a multi-agency initiative to encourage open competitive markets; remove market barriers in developing countries to clean energy technologies; and to provide new incentives for clean energy technology innovation and export. The initiative will promote U.S. clean energy exports, create high-value jobs, and assist developing countries in fighting air pollution and climate change.

**Bioenergy & Bio-based Products Initiative.** The budget includes \$289 million to accelerate the development of bio-based technologies, which convert crops, trees and other "biomass" into a vast array of fuels and products – an increase of \$93 million over FY 2000 enacted levels. In addition to helping meet environmental challenges like global warming, this initiative will increase the viability of alternative energy sources, support farm incomes, and diversify and strengthen the rural economy.

**Clean Air Partnership Fund.** The President proposes \$85 million for a new fund to provide grants to state and local governments for projects that reduce both greenhouse gases and pollutants like soot, smog, and air toxics.

**Climate Change Technology Initiative (CCTI).** The CCTI is a package of targeted tax incentives and investments aimed at increasing energy efficiency and spurring the broader use of renewable energy. The package will save consumers money and reduce greenhouse gas emissions at the same time. CCTI investments have risen substantially each of the past two years. The President's new budget proposes a still more accelerated effort.

**\$4.0 billion in Tax Incentives over 5 years.** The proposed package contains \$4.0 billion over five years in tax cuts (\$201 million for FY 2001) for consumers who purchase energy efficient products and for producers of energy from renewable sources. This year's CCTI tax package is \$400 million greater than last year's proposed five-year package. Highlights include:

- Tax credits for energy efficient homes. Consumers can receive a \$1000-2000 credit

toward the purchase of a new energy efficient home; a 20 percent tax credit for the purchase of selected energy efficient products for homes and buildings; and a \$1000-2000 credit for installing a solar energy system.

- Tax credits for fuel-efficient cars. The package extends the current tax credit (of up to \$4000) through 2006 for qualified electric and fuel cell vehicles and also includes a tax credit of \$500-3000 for the purchase of a qualifying hybrid vehicle from 2003-2006.
- Tax credits for clean energy. The package extends the 1.5 cent per kilowatt hour tax credit for the production of electricity from wind and closed-loop biomass; provides credits for open-loop biomass facilities and coal-biomass cofiring; and provides credits for electricity produced from methane from certain landfills.

**\$1.4 billion for Energy Efficiency & Clean Energy.** The proposed package contains over \$1.4 billion in FY 2001 to research, develop, and deploy clean technologies for the four major carbon-emitting sectors of the economy -- buildings, transportation, industry, and electricity -- a 30 percent increase over the amount appropriated in FY 2000. Highlights include:

- Partnership for a New Generation of Vehicles. PNGV is a government-industry effort to develop comfortable, affordable cars that meet all applicable safety and environmental standards and get up to three times the fuel efficiency of today's cars. The combined proposal for PNGV in the FY 2001 budget is \$255 million, an increase of \$30 million over FY 2000 enacted levels.
- Partnership for Advancing Technology in Housing. PATH is a government-industry partnership to improve the energy efficiency of new homes by more than 50 percent and to retrofit 15 million existing homes to make them 30 percent more energy efficient within a decade. The FY 2001 budget request for building efficiency efforts, such as PATH, Energy Star, and Building America, totals \$275 million, a 42 percent increase over FY 2000 appropriations.
- Renewable Energy. The President proposes \$410 million for the Department of Energy's solar and renewable energy programs, a 32 percent increase over the amount appropriated in FY 2000. The package includes expanded efforts in key renewable technologies, such as wind, bioenergy, photovoltaics, and geothermal energy.

**Cleaner Fossil Fuels.** The budget request contains \$233 million for R&D to develop next-generation technologies for coal combustion with much higher energy efficiency and lower greenhouse gas emissions.

**Weatherization & State Energy Grants.** The budget request includes \$191 million -- a \$22 million increase over FY 2000 appropriations -- to deliver energy conservation services to low-income Americans and to assist state energy offices in addressing their energy priorities.

**U.S. Global Change Research Program.** The FY 2001 request includes over \$1.7 billion for scientific research to improve our understanding of human and natural forces that influence the Earth's climate system and to assess the likely consequences of global warming.

# Climate Change Technology Initiative: \$4.0 Billion in Tax Incentives

The President is proposing a new \$4.0 billion package in tax incentives over five years to help reduce greenhouse gas emissions by spurring the purchase of energy efficient products and the use of renewable energy (see Table 2).

**Table 2. CCTI Tax Incentives (\$ in Millions)**

**Revenue Effect**

|                                                                                                                                                                                                                  | <b>FY 2001</b> | <b>Total<br/>FY01-05</b> |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|--------------------------|
| <b>Homes and Buildings</b>                                                                                                                                                                                       |                |                          |
| Provide tax credit for energy efficient building equipment                                                                                                                                                       | -18            | -201                     |
| Provide tax credit for new energy efficient homes                                                                                                                                                                | - 82           | -633                     |
| Provide tax credit for solar energy systems                                                                                                                                                                      | -9             | -132                     |
| <b>Vehicles</b>                                                                                                                                                                                                  |                |                          |
| Extend tax credit for electric and fuel cell vehicles and provide tax credits for qualified hybrid vehicles                                                                                                      | 0              | -2078                    |
| <b>Clean Energy</b>                                                                                                                                                                                              |                |                          |
| Extend tax credit for electricity produced from wind and closed-loop biomass; provide credits for open-loop biomass facilities and coal-biomass cofiring; and provide credits for methane from certain landfills | -91            | -976                     |
| <b>Industry</b>                                                                                                                                                                                                  |                |                          |
| Provide 15-year recovery period for distributed power property                                                                                                                                                   | -1             | -10                      |
| <b>TOTAL**</b>                                                                                                                                                                                                   | <b>-201</b>    | <b>-4030</b>             |

\*\*Total may not add due to rounding.

## HOMES AND BUILDINGS

- ***Tax credit to consumers who purchase new energy efficient homes.*** To encourage the purchase of new energy efficient homes, consumers would receive a tax credit of \$1,000 for homes purchased from 2001-2003 that use at least 30 percent less energy than the standard under the 1998 International Energy Conservation Code (IECC) and a credit of \$2,000 for homes purchased from 2001-2005 that use at least 50 percent less energy than the IECC standard.
- ***Tax credit for energy efficient equipment in new and existing homes or buildings.*** This credit will encourage the purchase of electric heat pump water heaters, natural gas heat pumps and fuel cells. The credit would apply to both residential and commercial equipment. The credit would be 20 percent of the cost of the investment, subject to a cap, for equipment purchased from 2001-2004.

- ***Tax credit for solar energy systems.*** A 15 percent tax credit will encourage the purchase by consumers and businesses of solar energy systems. The maximum credit would be \$2,000 for rooftop photovoltaic systems placed in service from 2001-2007 and \$1,000 for solar water heating systems placed in service from 2001-2005.

## VEHICLES

- ***Tax credits for electric, fuel cell, and qualified hybrid vehicles.*** Cars and light trucks (including minivans, sport utilities, and pickups) currently account for 20 percent of greenhouse gas emissions. Tax credits for electric, fuel cell, and hybrid vehicles will help to move advanced technologies from the laboratory to the highway. These technologies can significantly reduce emissions of carbon dioxide, the most prevalent greenhouse gas.

**--Extend the current tax credit for electric vehicles and fuel cell vehicles.** Under current law, a 10 percent credit, up to \$4,000, is provided for the cost of qualified electric vehicles and fuel cell vehicles. The credit begins to phase down in 2002 and phases out in 2005. The President's proposal would extend the tax credit at its \$4,000 maximum level through 2006.

**--Tax credits for hybrid vehicles.** The credit -- available for all qualifying vehicles, including cars, minivans, sport utility vehicles, and pickup trucks -- would range from \$500 to \$3,000 for purchases of a qualified hybrid vehicle from 2003 through 2006, depending upon the vehicle's design performance.

## CLEAN ENERGY

- ***Tax credit for electricity produced from wind.*** Current law encourages the production of electricity from wind, which emits no greenhouse gases, through a tax credit of 1.5 cents per kilowatt hour (adjusted for inflation after 1992). The current tax credit covers facilities placed in service before January 1, 2002. The President proposes a 2.5-year extension of this tax credit.
- ***Tax credits for electricity produced from biomass.*** Biomass refers to trees, crops and agricultural wastes used to produce power, fuels or chemicals. This package of credits would:

**-- Extend current "closed-loop" biomass credit.** This proposal extends for 2.5 years the current 1.5 cent per kilowatt hour tax credit (adjusted for inflation after 1992), which covers facilities placed in service before January 1, 2002.

**-- Provide credits for "open loop" biomass facilities.** This proposal expands the definition of biomass eligible for the 1.5 cent tax credit to include certain forest-related resources and agricultural and other sources for facilities placed in service from 2001 through 2005, and provides a 1.0 cent credit for electricity produced from 2001 through 2003 from facilities placed in service prior to January 1, 2001.

-- **Provide a credit for cofiring biomass and coal.** This proposal adds a 0.5 cent per kilowatt hour tax credit for electricity produced by cofiring biomass in coal plants from 2001 through 2005.

-- **Provide credit for methane from landfills.** This proposal adds a 1.5 cent per kilowatt hour credit for electricity produced from landfills not subject to EPA's 1996 New Source Performance Standards/Emissions Guidelines (NSPS/EG) and 1.0 cent per kilowatt hour for landfills subject to NSPS/EG. Qualified facilities would be facilities placed in service after December 31, 2000 and before January 1, 2006.

## **INDUSTRY**

- ***15-year recovery period for distributed power property.*** The development of distributed power technologies has made it possible to generate electricity locally at dispersed industrial, commercial, and residential locations. Such technologies can be more energy efficient and generate fewer greenhouse gases than conventional generation methods. This proposal would simplify and rationalize the current depreciation system by assigning a single 15-year recovery period to distributed power property.



# Climate Change Technology Initiative: \$4.0 Billion in Tax Incentives

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|                            |                                                                                                                                                                                                                  | <b>Revenue Effect</b> |                          |
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| <b>Vehicles</b>            |                                                                                                                                                                                                                  |                       |                          |
|                            | Extend tax credit for electric and fuel cell vehicles and provide tax credits for qualified hybrid vehicles                                                                                                      | 0                     | -2078                    |
| <b>Clean Energy</b>        |                                                                                                                                                                                                                  |                       |                          |
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| <b>Industry</b>            |                                                                                                                                                                                                                  |                       |                          |
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***Real Benefits At Home and Abroad.*** The initiative will help lay the technical and policy foundation that will allow developing and transition countries to build a clean energy future, leapfrogging past the polluting energy technologies used by the industrial countries, while building competitive markets open to U.S. firms. The goals of this initiative include:

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**Initiative Structure.** This initiative will streamline current bureaucratic procedures to better assist U.S. firms wishing to invest in clean energy projects in developing and transition countries. In so doing, it will encourage public-private partnerships with foreign counterparts to demonstrate clean energy technologies, drive down their cost, and facilitate private sector financing for their large-scale deployment. It will also encourage open, competitive markets while protecting public interests. The initiative will employ a range of proven policy tools, including U.S. technical and policy assistance to developing countries through personnel exchanges, conducting collaborative R&D with key foreign research groups, developing integrated renewable energy, energy efficiency, and advanced fossil energy technologies and pilot projects, and providing a range of trade supports to expand clean energy exports.

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**THE CLINTON-GORE ADMINISTRATION  
FY 2001 BUDGET:**

**PROTECTING OUR ENVIRONMENT  
AND PUBLIC HEALTH**

**SUMMARY DOCUMENTS**

**February 7, 2000**

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Lands Legacy Initiative

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Detailed Summary

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Protecting and Restoring Wetlands

Climate Change

Overview

Greening the Globe

Overview

Detailed Summary

Livable Communities

Overview

Agricultural Conservation

Restoring the Great Lakes

Researching Environmental Causes of Disease  
(in FY 2001 Health Care budget)

Budget Table

## ***PRESIDENT CLINTON'S FY 2001 BUDGET: PROTECTING OUR ENVIRONMENT AND PUBLIC HEALTH***

February 7, 2000

***President Clinton is proposing a record \$42.5 billion in FY 2001 to protect our natural resources, our communities and families, and the global environment. The proposed environment budget represents an 11 percent increase over FY 2000 and a 36 percent increase over FY 1993. It includes major initiatives to preserve America's lands legacy, combat global warming, protect tropical forests, end childhood lead poisoning, and build more livable communities.***

***A Permanent Lands Legacy for America.*** In FY 2000, the President secured \$652 million, a 42 percent increase for his Lands Legacy initiative. For FY 2001, the President is proposing \$1.4 billion, the largest one-year investment ever in conserving America's land and coastal resources. In addition, the President is proposing a new, protected budget category to preserve this higher level of funding in future years. More than half this dedicated funding would be used to support state and local conservation efforts. For FY 2001, the President proposes:

- ***Helping Communities Protect Wildlife and Open Space*** -- \$521 million, almost four times current funding, to help state, local, and tribal governments protect wildlife and local green spaces. Priorities include protecting threatened farmland, working forests, wetlands, and urban parks. This includes a new \$100 million grant program to help states protect non-game wildlife.
- ***Saving Natural and Historic Treasures*** -- \$450 million, a 7 percent increase, for federal acquisition and protection of critical lands, including: wildlife-rich bayous in the Lower Mississippi Delta, giant sequoias in California's Sierra Nevada, Civil War battlefields, the historic Lewis and Clark trail, fragile Southern California desert, and the Florida Everglades.
- ***Providing Special Assistance to Coastal Areas*** -- \$429 million, a 159 percent increase, to protect ocean and coastal resources, including \$100 million for a new program to help coastal states address environmental impacts of existing offshore oil and gas development, and \$100 million to help state, local and tribal efforts to restore coastal salmon in the Pacific Northwest.

***Meeting the Challenge of Global Warming.*** The President is proposing \$2.4 billion – a 42 percent increase -- to combat global climate change, and \$1.7 billion for scientific research into factors influencing climate and the likely consequences of global warming. Highlights include:

- ***Promoting Clean Energy at Home and Abroad*** -- \$289 million to develop technologies that convert crops and other "biomass" into clean fuels and other products; and over \$200 million, a 105 percent increase, to promote the export of clean energy technologies to developing nations.
- ***Moving New Technology into the Marketplace*** -- \$201 million (and a total of \$4 billion over five years) in tax credits for the purchase of energy-efficient cars, homes, and appliances, and for the production of wind, solar, and biomass power.
- ***Advancing Clean Energy Research*** -- \$1.4 billion, a 30 percent increase, to develop and deploy renewable energy and energy efficiency technologies for the buildings, transportation, industry and utility sectors; and to research coal and natural gas efficiencies and carbon sequestration.
- ***Helping Local Clean Air Efforts*** -- \$85 million for a new Clean Air Partnership Fund for state and local projects that reduce both greenhouse gases and air pollutants like soot and smog.

***Protecting Forests and Biodiversity Around the World.*** The President is proposing \$150 million for a new Greening the Globe initiative to help stem the loss of forests worldwide – especially tropical forests, which support more than half the known species on earth. The initiative will help developing nations strengthen their economies by preserving their forests. It includes:

- Targeted Conservation Investments -- \$100 million, a 60-percent increase, for programs at the U.S. Agency for International Development (USAID) that help more than 60 countries in Africa, Asia, and Latin America conserve their forests and other natural areas.
- Debt-for-Nature Swaps -- \$37 million, almost three times current funding, to relieve developing countries of debt owed to the United States when they commit to invest in forest conservation.
- Research and Wildlife Protections -- \$10 million to protect wildlife habitat and research causes and prevention of forest fires; \$3 million to protect endangered elephants, tigers, and rhinos.
- Monitoring Forest Loss from Space -- A new program led by USAID and NASA to compile the first comprehensive satellite maps of the world's tropical forests, and to work with national and international partners to regularly monitor and report on future changes in forest cover.

**Building Livable Communities.** The President is proposing \$9.3 billion, a 14 percent increase, for the Administration's Livable Communities initiative, which helps communities grow in ways that enhance their quality of life and ensure strong, sustainable economic growth. Priorities include:

- Community Transportation Choices -- \$9.1 billion to help ease traffic congestion, including a record \$6.3 billion for light rail and other transit systems; \$1.6 billion for innovative local programs that ease congestion while reducing air pollution; and \$468 million for an expanded passenger rail fund.
- Better America Bonds -- \$700 million in tax credits over five years to fund \$10.75 billion in new bond authority for state, tribal, local investments to save green space, create or restore urban parks, protect water quality, and clean up brownfields.
- Crime Data Sharing -- \$125 million for grants to state and local governments to improve public safety through data sharing and the use of advanced crime-solving technologies.
- "Smart Growth" Partnerships -- \$25 million to promote strategic regional "smart growth" planning in urban and rural communities.

**Protecting Children From Lead Poisoning.** The President is proposing \$165 million to launch a 10-year strategy to end childhood lead poisoning by eliminating lead hazards, strengthening enforcement, advancing research, and improving health monitoring and intervention. FY 2001 priorities include:

- Making Homes Lead-Safe -- \$120 million, a 50 percent increase, for grants and other Housing and Urban Development efforts to reduce lead paint hazards in low-income homes with children under six.
- Increased Enforcement -- \$6 million for the Environmental Protection Agency and the Department of Justice to increase public education and enforcement of lead-disclosure rules.

**Promoting Conservation on the Farm.** The President is proposing \$3 billion, a \$1.3 billion increase over currently authorized levels, for voluntary programs that help farmers protect water quality and wildlife habitat. A new \$600 million Conservation Security Program would provide additional income to family farmers who adopt comprehensive plans to curb erosion and protect water supplies from polluted runoff. Other proposed increases would expand efforts to restore habitat, preserve streamside buffer zones, and protect farmland threatened by sprawl.

**Restoring the Great Lakes.** The President is proposing a new \$50 million initiative to help state and local governments restore polluted "areas of concern" in the Great Lakes so they can be used for fishing, swimming, boating and urban redevelopment. Matching grants could be used to clean up contaminated sediments, control stormwater, restore wetlands, acquire greenways and buffers, and control polluted runoff. State or local governments would provide at least 40 percent of project costs, resulting in a total investment of more than \$80 million.



# ***PRESIDENT CLINTON AND VICE PRESIDENT GORE: LASTING PROTECTION FOR AMERICA'S LANDS LEGACY***

February 7, 2000

***President Clinton's FY 2001 budget will propose a record \$1.4 billion to protect land and coastal resources -- and will seek dedicated funding at this level each and every year to ensure continued efforts to preserve America's natural heritage. This proposed Lands Legacy funding would provide significant new resources to states and communities to protect wildlife and local green spaces, support federal efforts to save natural and historic treasures, and expand efforts to protect ocean and coastal resources.***

***Making our Lands Legacy Permanent.*** President Clinton secured \$652 million in FY 2000 for the Lands Legacy initiative, a 42 percent increase. For FY 2001, the President is proposing \$1.4 billion, the largest one-year investment ever in conserving America's lands. The President also is proposing a new budget category to preserve this higher level of funding in future years. More than half the funding would support state and local conservation efforts. Specific appropriations within the \$1.4 billion cap would be decided each year. These dedicated funds could not be spent on purposes other than Lands Legacy, and if funds are not appropriated in any given year, the cap would rise by a corresponding amount the next year. This would create a lasting endowment future generations can draw on to protect precious land and coastal resources.

***Helping Communities Protect Wildlife and Open Space.*** This year, Lands Legacy is providing \$141 million to state, local, and tribal governments to help protect wildlife and local green spaces. In FY 2001, the President is proposing \$521 million, almost four times current funding. Priorities include:

- ***Wildlife Protection*** -- \$100 million for a new grant program to help states protect non-game wildlife by acquiring, protecting, and enhancing critical habitat; and \$65 million, a 183 percent increase, to support habitat conservation plans and other collaborative tools that protect endangered species.
- ***Land Acquisition Grants*** -- \$150 million, almost four times current funding, for matching grants to states to acquire land or easements for parks, greenways, recreation, wetlands, and wildlife habitat.
- ***Urban Parks and Forests*** -- \$20 million, a tenfold increase, to restore parks in distressed urban neighborhoods; and \$40 million to establish, expand and maintain urban and community forests.
- ***Forest and Wetland Protection*** -- \$60 million to buy conservation easements on private forestland threatened by development; and \$30 million for matching grants to protect and restore wetlands.
- ***Farmland Protection*** -- \$65 million in mandatory funding (over and above the \$1.4 billion cap) for matching grants to protect more than 130,000 acres of farmland threatened by development.

***Saving Natural and Historic Treasures.*** In FY 2001, the President is proposing \$450 million, a 7 percent increase, for federal land acquisitions. Priorities include:

- ***Lower Mississippi Delta*** -- \$6.5 million to protect bayous and wetlands in Arkansas and Louisiana.
- ***Giant Sequoias*** -- \$4 million to protect ancient sequoias in California's Sierra Nevada.
- ***Everglades*** -- \$80 million to continue Everglades restoration and to expand Florida wildlife refuges
- ***Civil War Battlefields*** -- \$22 million to protect Gettysburg, Masassas, Harpers Ferry and other sites.
- ***Lewis and Clark Trail*** -- \$15.1 million to protect the explorers' historic route along the Missouri River.

***Providing Special Assistance to Coastal Areas.*** The President is proposing \$429 million, a 159 percent increase, for programs that protect ocean and coastal resources, including:

- ***Coastal Impact Assistance Grants*** -- \$100 million for a new program to help coastal states address the environmental impacts of existing offshore oil and gas development.
- ***Pacific Northwest Salmon Fund*** -- \$100 million, a 72 percent increase, to help state, local and tribal efforts to restore thriving runs of wild coastal salmon.

Other priorities include \$159 million to states to protect, restore, and revitalize coastal areas; \$35 million, a 38 percent increase, to protect and expand national marine sanctuaries; \$15 million, a 150 percent increase, to protect and rebuild coral reefs; and \$20 million for estuary research.

***LANDS LEGACY:  
LASTING PROTECTION FOR AMERICA'S NATURAL TREASURES  
February 7, 2000***

Over the past seven years, President Clinton and Vice President Gore have secured stronger protection for tens of millions of acres of precious land across America – from the Florida Everglades to Yellowstone to the California redwoods. Last year, they secured \$652 million, a 42 percent increase, for a new Lands Legacy initiative supporting federal, state, and local efforts to protect America's land and coastal resources.

Building on these successes, the President's new budget proposes a record \$1.4 billion for Lands Legacy in FY 2001 – a 93 percent increase and the largest one-year investment ever requested for conserving America's lands. Also, the President proposes a new budget category to ensure permanent funding at this level in future years. More than half the funding would be dedicated to state and local conservation efforts. While specific appropriations within the \$1.4 billion cap would be decided each year, funds could not be spent on purposes other than Lands Legacy. If funds were not appropriated in any given year, the cap would rise by a corresponding amount the following year. This would create a lasting endowment future generations can draw on to protect precious land and coastal resources.

Proposed FY 2001 Lands Legacy priorities include:

- \$521 million, almost four times current funding, to help states and communities protect wildlife and local green spaces;
- \$450 million, a 7 percent increase, for federal efforts to save natural and historic treasures;
- \$429 million, a 159 percent increase, to protect ocean and coastal resources, including a new program to help coastal states address environmental impacts of existing offshore oil and gas development.

The FY 2001 funding would be administered by the Department of the Interior (DOI), \$735 million; the Department of Commerce's National Oceanic and Atmospheric Administration (NOAA), \$429 million; and the Department of Agriculture (USDA), \$236 million. In addition to discretionary funding of \$1.4 billion, Lands Legacy includes \$65 million in mandatory funding for USDA's Farmland Protection Program, for a total of \$1.465 billion in FY 2001.

***Helping Communities Protect Wildlife and Open Space***

*State Land Acquisition Grants* - Lands Legacy includes \$150 million for matching grants to states for the acquisition of land and easements for parks, greenways, outdoor recreations, wildlife habitat, and coastal wetlands. The DOI program focuses the state grants program on 'smart growth' and open space preservation, with not more than 50 percent of the funds allocated to states for development projects. In addition, one-half of the grant funding will be awarded based on secretarially developed criteria, with priority going to open space protection and projects that are consistent with statewide "smart growth" plans.

State Planning Partnerships - The initiative proposes a new \$50 million program of grants, contracts, and technical assistance to state and local governments to develop “smart growth” plans for open space preservation and strategies to manage urban growth. The program, administered through Interior’s U.S. Geological Survey (USGS), will use USGS expertise in data collection, management and analysis to assist state and local entities in managing local resources, planning for urban growth, and identifying sensitive land for acquisition and protection according to locally determined priorities. Approximately half of the total funds would be awarded as competitive grants and matched 50 percent by the recipient.

Cooperative Endangered Species Conservation Fund - The initiative proposes \$65 million -- a \$42 million increase -- for state and local government land acquisition to protect threatened and endangered species. By supporting Habitat Conservation Plans and other flexible tools under the Endangered Species Act, the Fund promotes collaborative strategies that sustain both wildlife and economic development. Interior’s U.S. Fish and Wildlife Service (FWS) administers the program.

State Non-Game Wildlife Grants - A new \$100 million grant program is proposed to assist states in protecting non-game wildlife populations from decline by acquiring, protecting, and enhancing non-game wildlife and their habitat. The grants would strengthen state efforts to plan, inventory, monitor, and research non-game species as well as support habitat restoration, conservation education, and non-game dependent recreation projects. Interior’s FWS will administer the program.

North American Wetlands Conservation Fund - The initiative includes \$30 million – a \$15 million increase to the fully authorized level – for grants to assist federal, state, local, and tribal governments, the private sector, land trusts, and the public acquire, protect, restore, or enhance wetlands, and restore waterfowl and other wetland-dependent wildlife. All Federal funds must be matched by the grant recipients. Interior’s FWS will administer the program.

Forest Legacy Program - To protect private forest land that provides critical wildlife habitat and is threatened by development, the initiative proposes \$60 million -- an increase of 100 percent -- for matching grants to states for the purchase of permanent conservation easements. Use of protected lands for forestry and compatible activities is permitted. USDA’s Forest Service administers the program, and the proposed funding would protect about 150,000 acres.

Urban and Community Forestry - The initiative proposes \$40 million -- a 29 percent increase -- for matching grants to states and communities to establish, maintain, and expand urban and community forests and related green spaces. The program, administered by the Forest Service, operates in partnership with 8,000 volunteer organizations in more than 10,000 communities. The proposed funding would support 75,000 projects in more than 10,000 communities.

Smart Growth Partnership - Lands Legacy proposes a new revolving loan program to support acquisition of land and easements in rural areas. The Partnership, administered by USDA, would make loans to intermediate borrowers (state, local and tribal governments ), which in turn would lend funds to rural businesses, land trusts and other nonprofit organizations. Proposed funding of \$6 million would support about \$30 million in loans. Priorities are supporting “smart growth” strategies and helping owners of under-producing forest land at risk of sale improve forest productivity.

*Urban Parks and Recreation Recovery* - The initiative proposes \$20 million in matching grants and technical assistance – a 10-fold increase -- for the restoration of parks in economically distressed urban communities. The National Park Service (DOI) program awarded over 1,200 grants from 1978 to 1995. Funding of \$2 million is provided in FY 2000, the first appropriation since 1995.

### ***Saving America's Natural and Historic Treasures***

The initiative increases Federal land acquisition funding by 7 percent to a total of \$450 million (\$320 million for DOI, and \$130 million for USDA). In recent years, the Administration has used this funding to protect Yellowstone National Park from mining, save ancient redwoods in California's Headwaters Forest, preserve Civil War battlefields, complete the Maine-to-Georgia Appalachian Trail, protect the Baca Ranch in New Mexico, and preserve hundreds of other natural and historic sites across the country.

Priorities for FY 2001 include:

- Completing the acquisition of over 180,000 acres in California's Mojave Desert;
- Protecting important sites along the historic Lewis and Clark Trail;
- Making additions to wildlife refuges and national forests in New England;
- Acquiring lands critical to the ongoing restoration of Florida's Everglades;
- Protecting Civil War battlefields in Maryland, Mississippi, Pennsylvania, Tennessee, Virginia, and West Virginia;
- Preserving ancient sequoias in California's Sierra Nevada;
- Protecting bayous and bottomland hardwood forests in the Lower Mississippi Delta.

### ***Protecting Our Oceans and Coasts***

*Coastal Impact Assistance* – A new \$100 million impact assistance program, to be administered by NOAA, is proposed to provide those coastal states involved in offshore oil and gas production with additional resources needed to protect and sustainably use ocean and coastal resources. Offshore oil and gas development places a variety of additional social, economic and environmental demands on ports, communities, and natural resources of affected coastal states. The funds would provide grants to coastal states and territories to implement activities consistent with Coastal Zone Management Plans and that increase protection and sustainable management of coastal resources such as habitat protection, community revitalization, improved coastal access, and public education on coastal issues.

*Coastal Zone Management Act Program* - To help promote "smart growth" strategies along America's coasts, the initiative proposes \$159 million, a 269-percent increase, to help coastal states implement community-based projects for environmentally sound economic development and mitigate urban sprawl. Competitive grants can be used by coastal communities to acquire lands, protect wildlife habitat, protect life and property from coastal hazards, revitalize ports and urban waterfronts, and

reduce polluted runoff.

*National Marine Sanctuaries* - Lands Legacy proposes \$35 million -- a 38 percent increase -- to strengthen protections at the 12 Federal marine sanctuaries off California, Florida, Georgia, Hawaii, Louisiana, Massachusetts, North Carolina, Texas, Washington, and American Samoa, and plan for future marine sanctuaries. The funding will allow NOAA to accelerate the adoption and implementation of management plans for existing Federal sanctuaries and expand outreach activities with coastal communities.

*National Estuarine Research Reserves System* - The initiative proposes \$20 million -- a 60-percent increase -- to expand a network of critical estuaries representing all the biological regions along America's coasts. NOAA provides guidance and matching funds to states to acquire land, protect resources, and conduct research and education. Twenty-two non-Federal reserves in 19 states and territories manage about 500,000 acres. The proposed funding would help support additional sites doubling the protected acreage.

*Coral Reef Restoration* - Lands Legacy proposes \$15 million -- a \$9 million increase -- to protect fragile coral reefs from pollution and other human impacts. NOAA, in conjunction with states, territories, the Interior Department, and other Federal agencies, would restore injured reefs in Puerto Rico, Florida, Hawaii, and U.S. territories; and develop a coral nursery to grow donor material and other restoration techniques.

### ***Mandatory Programs***

*Farmland Protection Program (FPP)* - In addition to the \$1.4 billion in dedicated discretionary funding, \$65 million in mandatory funding is proposed for the FPP to provide matching grants to state, local, and tribal governments to leverage their farmland preservation efforts. This funding, within the Administration's Farm Conservation Initiative, would permanently protect more than 130,000 acres from development, helping to preserve productive soils, open space, and rural economies. Mandatory funding for the FPP was first enacted as part of the 1996 Farm bill; however, those funds have been exhausted. Last year, as part of Lands Legacy, the Administration requested \$50 million in discretionary funds for the FPP, but Congress appropriated none. This year, the Administration proposes mandatory funds for the FPP, as was originally provided under the Farm bill.

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# ***PRESIDENT CLINTON AND VICE PRESIDENT GORE: RESTORING PACIFIC NORTHWEST SALMON***

February 7, 2000

***President Clinton's FY 2001 budget proposes \$100 million, a 72 percent increase, for the Pacific Coastal Salmon Recovery Fund, which helps state, tribal, and local governments restore thriving runs of wild chinook, steelhead, sockeye and coho salmon. This year, the proposed funding is included in the Administration's Lands Legacy initiative, which the President is proposing as a protected budget category to ensure dedicated funding in future years. In addition, the budget proposes \$190 million for other salmon restoration activities in the Pacific Northwest.***

***Preserving a Rich Regional Heritage.*** Salmon, long integral to the culture and economy of the Pacific Northwest, have declined dramatically over the past century. Last year the President secured \$58 million for a new Pacific Coastal Salmon Recovery Fund to help states and tribes protect and rebuild coastal salmon stocks (\$18 million for Washington, \$14 million for Alaska, \$9 million each for Oregon and California, and \$8 million for tribes). Other Administration efforts in 1999 included: negotiating an historic Pacific Salmon Treaty with Canada and securing \$25 million to begin implementing it; adding 57,000 acres to the Saddle Mountain National Wildlife Refuge in Washington, including critical salmon habitat along the last free-flowing section of the Columbia River; and securing full funding to purchase two dams slated for removal on the Elwha River in Washington's Olympic National Park.

***Partnership for Salmon Recovery.*** To further salmon restoration efforts, the President is proposing \$100 million for the Pacific Coastal Salmon Recovery Fund in FY 2001. The funds, which require a 25 percent state or local matching contribution, can be used to:

- purchase conservation easements to protect and restore vital habitat and improve water quality in salmon-bearing rivers and streams;
- plant trees and other vegetation, rebuild culverts, stabilize stream banks and undertake other projects to restore salmon habitat and spawning grounds;
- map and assess watersheds to determine the quality and quantity of existing habitat and to help target restoration activities;
- monitor the success of restoration activities to refine future activities.

A portion of the fund, not to exceed 10 percent, is reserved to help Tribal experts design projects, expand their field work and undertake other "capacity-building" activities.

***Other Salmon Recovery Efforts.*** Additional funding proposed in FY 2001 to strengthen restoration efforts include:

- \$39 million, a 30 percent increase, for National Marine Fisheries Service efforts, including \$9 million in new funding to continue developing and implementing recovery plans for 26 stocks of Pacific Northwest salmon listed as threatened or endangered.
- \$60 million, a 140 percent increase, to continue implementing the Pacific Salmon Treaty. The treaty established two regional funds to improve fisheries management and enhance bilateral scientific cooperation between the two countries, and provides for funding to buy back fishing permits to reduce the commercial fishing fleet in Washington state.
- \$91 million, a 35 percent increase, for the Army Corps of Engineers' ongoing salmon restoration activities on the Columbia and Snake Rivers (Washington, Oregon, and Idaho).

# THE WHITE HOUSE

## Office of the Vice President

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**For Immediate Release**  
**Wednesday, January 19, 2000**

**Contact:**  
**(202) 456-7035**

### **VICE PRESIDENT AL GORE ANNOUNCES \$30 MILLION ADMINISTRATION REQUEST TO PROTECT AND RESTORE NORTH AMERICAN WETLANDS**

Washington, DC -- Vice President Al Gore announced today that the Administration will propose \$30 million -- double this year's funding -- to protect and restore wetlands through voluntary partnerships with state and local governments, farmers and other private landowners, Indian tribes and non-profit conservation groups.

The Vice President said that the Administration's fiscal year 2001 budget will request a \$15 million increase for the North American Wetlands Conservation Fund, a popular and effective wetlands conservation program, which has protected 3.2 million acres of wildlife habitat in the United States. Last year, the Administration proposed and secured \$15 million for the North American program in the U.S. Fish and Wildlife Service budget.

"America's wildlife and wetlands are part of our heritage. We are committed to expanding voluntary partnerships to protect wetlands and wildlife and increase opportunities for outdoor recreation, including hunting, fishing, bird watching and other activities," said Vice President Gore.

"The Administration's proposal to double the funding for North American wetlands protection is a major new commitment to leverage funding to protect key wetlands across the country."

Established by Congress in 1989, the North American wetlands program is authorized by the North American Wetlands Conservation Act (NAWCA) "to conserve wetland ecosystems and waterfowl and the other migratory birds and fish and wildlife that depend upon such habitats." In 1998, President Clinton signed NAWCA re-authorizing legislation that raised the annual funding authorization from \$15 million to \$30 million.

If the proposed fiscal year 2001 increase is approved by Congress, the North American Wetlands Conservation Council (NAWCC), after reviewing project requests submitted by local partners, would make funding recommendations to the Migratory Bird Conservation Commission for final approval. The Migratory Bird Commission includes the Secretaries of Interior, Agriculture, the Administrator of the Environmental Protection Agency and Congressional leaders from the House and Senate.

Through voluntary partnerships, the proposed federal funding would leverage a minimum of an additional \$30 million in non-federal funds for a total of at least \$60 million through a one-to-one matching requirement. Many projects focus on restoring wetlands and acquiring wetlands from willing sellers to be managed for wildlife conservation by private organizations or state and

federal agencies. Wetlands restoration activities include re-vegetation, acquiring conservation easements and establishing water management capabilities.

The North American Wetlands Conservation Council includes representatives from the U.S. Fish and Wildlife Service, National Fish and Wildlife Foundation, states from each of the four migratory bird "flyways," and non-profit conservation organizations.

The North American Wetlands Conservation Council (NAWCC) has focused on projects designed to protect and restore important breeding grounds along with resting and over-wintering areas for waterfowl, other migratory birds and wetland wildlife. In the United States, these areas include the prairie pothole region in the upper Midwest, coastal areas in Louisiana and South Carolina, the Central Valley of California, the Chesapeake Bay and other areas. Projects from Canada and Mexico are eligible for funding.

Recently funded proposals include projects in Arkansas (\$667,000), California (\$1,525,000), Illinois (\$740,00), Iowa (\$600,000), Louisiana (\$1,000,000), Maryland (\$700,000), Michigan (\$1,000,000), Missouri (\$1,000,000), North Dakota (\$760,000), New Hampshire (\$944,00), New Jersey (\$1,000,000), Oregon (\$785,000), Texas (\$560,000), Vermont (\$1,000,000) and Washington State (\$966,000).

Additional information about NAWCA is available at the U.S. Fish and Wildlife Service web site at: <http://northamerican.fws.gov/nawcahp.html>



# President Clinton's FY 2001 Climate Change Budget

*"The greatest environmental challenge of the new century is global warming . . . If we fail to reduce the emission of greenhouse gases, deadly heat waves and droughts will become more frequent, coastal areas will flood, and economies will be disrupted. That is going to happen, unless we act. Many people . . . still believe you cannot cut greenhouse gas emissions without slowing economic growth. In the Industrial Age that may well have been true. But in this digital economy, it is not true anymore. New technologies make it possible to cut harmful emissions and provide even more growth."*

-- President Bill Clinton, State of the Union Address, January 27, 2000

**Meeting the Challenge of Global Warming.** Against a backdrop of growing scientific consensus that the Earth is warming – and that human activities are at least partly to blame – President Clinton's FY 2001 budget is proposing \$2.4 billion (a 43 percent increase over FY 2000 enacted levels) in funding to combat global climate change. This includes a series of new initiatives, such as accelerated efforts to develop clean energy sources both at home and abroad and a new Clean Air Partnership Fund to boost state and local efforts to reduce greenhouse gases and air pollution, as well as a five-year package of tax incentives to spur clean energy technologies and increased investment for R&D in energy efficient technology and renewable energy. In addition, the President is proposing more than \$1.7 billion for global change research, for a total package for FY 2001 of over \$4 billion.

**International Clean Energy Initiative.** To help accelerate the development and deployment of clean energy technologies around the world, President Clinton is proposing \$201 million (a more than 100 percent increase over FY 2000 enacted levels) for a multi-agency initiative to encourage open competitive markets; remove market barriers in developing countries to clean energy technologies; and to provide new incentives for clean energy technology innovation and export. The initiative will promote U.S. clean energy exports, create high-value jobs, and assist developing countries in fighting air pollution and climate change.

**Bioenergy & Bio-based Products Initiative.** The budget includes \$289 million to accelerate the development of bio-based technologies, which convert crops, trees and other "biomass" into a vast array of fuels and products – an increase of \$93 million over FY 2000 enacted levels. In addition to helping meet environmental challenges like global warming, this initiative will increase the viability of alternative energy sources, support farm incomes, and diversify and strengthen the rural economy.

**Clean Air Partnership Fund.** The President proposes \$85 million for a new fund to provide grants to state and local governments for projects that reduce both greenhouse gases and pollutants like soot, smog, and air toxics.

**Climate Change Technology Initiative (CCTI).** The CCTI is a package of targeted tax incentives and investments aimed at increasing energy efficiency and spurring the broader use of renewable energy. The package will save consumers money and reduce greenhouse gas emissions at the same time. CCTI investments have risen substantially each of the past two years. The President's new budget proposes a still more accelerated effort.

**\$4.0 billion in Tax Incentives over 5 years.** The proposed package contains \$4.0 billion over five years in tax cuts (\$201 million for FY 2001) for consumers who purchase energy efficient products and for producers of energy from renewable sources. This year's CCTI tax package is \$400 million greater than last year's proposed five-year package. Highlights include:

- Tax credits for energy efficient homes. Consumers can receive a \$1000-2000 credit toward the purchase of a new energy efficient home; a 20 percent tax credit for the purchase of selected energy efficient products for homes and buildings; and a \$1000-2000 credit for installing a solar energy system.

- Tax credits for fuel-efficient cars. The package extends the current tax credit (of up to \$4000) through 2006 for qualified electric and fuel cell vehicles and also includes a tax credit of \$500-3000 for the purchase of a qualifying hybrid vehicle from 2003-2006.
- Tax credits for clean energy. The package extends the 1.5 cent per kilowatt hour tax credit for the production of electricity from wind and closed-loop biomass; provides credits for open-loop biomass facilities and coal-biomass cofiring; and provides credits for electricity produced from methane from certain landfills.

**\$1.4 billion for Energy Efficiency & Clean Energy.** The proposed package contains over \$1.4 billion in FY 2001 to research, develop, and deploy clean technologies for the four major carbon-emitting sectors of the economy -- buildings, transportation, industry, and electricity -- a 30 percent increase over the amount appropriated in FY 2000. Highlights include:

- Partnership for a New Generation of Vehicles. PNGV is a government-industry effort to develop comfortable, affordable cars that meet all applicable safety and environmental standards and get up to three times the fuel efficiency of today's cars. The combined proposal for PNGV in the FY 2001 budget is \$255 million, an increase of \$30 million over FY 2000 enacted levels.
- Partnership for Advancing Technology in Housing. PATH is a government-industry partnership to improve the energy efficiency of new homes by more than 50 percent and to retrofit 15 million existing homes to make them 30 percent more energy efficient within a decade. The FY 2001 budget request for building efficiency efforts, such as PATH, Energy Star, and Building America, totals \$275 million, a 42 percent increase over FY 2000 appropriations.
- Renewable Energy. The President proposes \$410 million for the Department of Energy's solar and renewable energy programs, a 32 percent increase over the amount appropriated in FY 2000. The package includes expanded efforts in key renewable technologies, such as wind, bioenergy, photovoltaics, and geothermal energy.

**Cleaner Fossil Fuels.** The budget request contains \$233 million for R&D to develop next-generation technologies for coal combustion with much higher energy efficiency and lower greenhouse gas emissions.

**Weatherization & State Energy Grants.** The budget request includes \$191 million -- a \$22 million increase over FY 2000 appropriations -- to deliver energy conservation services to low-income Americans and to assist state energy offices in addressing their energy priorities.

**U.S. Global Change Research Program.** The FY 2001 request includes over \$1.7 billion for scientific research to improve our understanding of human and natural forces that influence the Earth's climate system and to assess the likely consequences of global warming.

**PRESIDENT CLINTON AND VICE PRESIDENT GORE:  
PROTECTING FORESTS AND BIODIVERSITY AROUND THE WORLD**

February 4, 2000

*President Clinton's FY 2001 budget will propose \$150 million for a new Greening the Globe initiative to help stem the loss of forests worldwide – especially tropical forests, which harbor a greater diversity of life than any place else on earth. The initiative aims to help developing nations strengthen their economies by preserving, rather than destroying, their irreplaceable forests. It would provide training and technical assistance to developing countries; support debt-for-nature swaps that preserve rain forests while relieving poor nations of crippling debt; protect endangered tropical species; and build the first complete set of satellite imagery tracking forest loss worldwide.*

***A Global Resource at Risk.*** Tropical forests are the world's richest ecosystems, supporting more than half the known species on earth. Yet despite growing worldwide concern, tropical forests continue to disappear at a rate of more than 50 acres a minute – an area the size of North Carolina each year. Leading causes include illegal logging, subsidies that promote overlogging, and deliberate burning to clear land for agriculture. At present rates, most remaining tropical forests could be lost over the coming century, destroying priceless biological resources and limiting options for sustainable growth.

***Promoting Prosperity through Conservation.*** The Clinton-Gore Administration has worked to protect forests and biodiversity by promoting conservation policies at the World Bank and other lending institutions, and through direct assistance to developing countries. The Greening the Globe initiative would provide a record \$150 million in FY 2001, an 88 percent increase, to strengthen these efforts:

- *Targeted Conservation Investments* -- \$100 million, a 60-percent increase, for programs at the U.S. Agency for International Development that help more than 60 countries in Africa, Asia, and Latin America conserve their forests and other natural areas. Funding would be targeted to areas especially rich in biological diversity that face significant threats, including:
  - Helping Indonesia, the world's leading exporter of tropical timber, improve management of its forests, home to more than 10 percent of the world's primate species.
  - Conserving national parks in the Amazon threatened by deforestation, including Bolivia's Madidi National Park, perhaps the world's most biologically diverse national park.
  - Helping African countries like Madagascar and Kenya strengthen their national protected areas systems and promote sustainable conservation-based economic development.
- *Debt-for-Nature Swaps* -- \$37 million, almost three times current funding, to save threatened forests while relieving developing country debt. Under the Tropical Forest Conservation Act, the United States can reduce debt owed by developing countries when they commit to invest local currency in forest conservation. Countries could include Bangladesh, Peru and the Philippines.
- *Research and Wildlife Protections* – \$10 million for Forest Service programs, including expanded research into the causes and prevention of forest fires; and \$3 million for the Fish and Wildlife Service to help Asian and African countries protect endangered elephants, tigers, and rhinos.
- *Monitoring Forest Loss from Space* – A new program led by USAID and NASA to compile the first comprehensive satellite maps of the world's tropical forests; and to work with national and international partners, including the Forest Service and the U.S. Geological Survey, to regularly monitor and report on future changes in forest cover.

## ***Greening the Globe: A New Initiative to Protect Forests and Biodiversity Around the World***

***Tropical forests sustain a greater diversity of life than any place else on Earth. Yet despite growing worldwide concern, tropical forests continue to disappear at a rate of more than 50 acres a minute – an area the size of North Carolina each year. To help stem this devastating loss, President Clinton and Vice President Gore are proposing a record \$150 million in FY 2001 – a \$70 million increase – for a new Greening the Globe initiative. This initiative will give developing countries tools and resources to strengthen their economies by protecting, not destroying, their irreplaceable forests.***

***A Global Resource at Risk.*** Tropical forests are the world's richest ecosystems, supporting more than half the known species on earth. They play an important role in maintaining a stable climate, and are a vital source of medicines and new materials. Only half the tropical forests that stood in 1800 survive today. Every day, another 100 species are lost to tropical deforestation. Leading causes of deforestation include illegal logging, subsidies that promote overlogging, and deliberate burning to clear land for agriculture. At present rates, most remaining tropical forests could be lost over the coming century, destroying priceless biological resources and limiting options for sustainable growth.

***Promoting Prosperity through Conservation.*** The Clinton-Gore Administration has been a worldwide leader in the protection of tropical forests and biodiversity. From promoting forest conservation policies at the World Bank and other international lending agencies to negotiating strengthened international agreements on biodiversity and forest protection, the United States has sought effective solutions that couple conservation with economic growth. U.S. agencies also provide direct technical assistance and financing to protect the world's most important tropical forests.

Through the Greening the Globe initiative, the Administration seeks to dramatically increase U.S. investment in forest and biodiversity conservation worldwide in FY 2001. The proposed funding, an 88 percent increase over FY 2000, would provide additional training and technical assistance to developing countries; support debt-for-nature swaps that preserve forests while relieving poor nations of crippling debt; protect endangered tropical species; and help build the first complete set of satellite imagery tracking forest loss worldwide.

Greening the Globe priorities total \$150 million and include:

***Targeted Conservation Investments*** – \$100 million in FY 2001 (up from \$62 million in FY 2000) for tropical forest and biodiversity conservation programs through the U.S. Agency for International Development (USAID). This funding will help over 60 developing countries across Latin America, Africa and Asia address the causes of deforestation and build their capacity for forest conservation and park protection activities. Funding would be targeted to areas especially rich in biological diversity that face significant threats. Projects include:

- ***In Southeast Asia:*** Indonesia is the world's leading exporter of tropical timber. Its forests face tremendous threats from destructive logging, the conversion of natural forests to palm oil plantations, and unchecked slash-and-burn agriculture. USAID will work to improve management of the country's vast but rapidly dwindling tropical forests, which are home to over 10 percent of the world's primate species and among of the most biologically diverse in the world. This initiative will enable USAID to expand its support of local forest management efforts, and will promote forest-friendly policies and agricultural practices.

- ***In South America:*** Bolivia's Madidi National Park is considered by some to be the world's most biologically diverse national park, with 1,200 species of birds, nearly twice the total bird species breeding in the continental United States. USAID will expand efforts to conserve national parks like Madidi in the Amazon. This initiative will allow USAID to work with conservation organizations, local park managers, and communities in many of these parks to address the serious threat posed by deforestation.
- ***In East Africa:*** With 79 percent of the 150 most widely used prescription drugs coming from nature, it is essential to address the staggering rate of species loss in tropical forests. For example, Madagascar is home to the Rosy Periwinkle, a plant from which medicine used to successfully treat childhood leukemia was developed. USAID will enhance its partnerships with key conservation organizations and governments to help African countries strengthen their national protected areas systems and promote sustainable conservation-based economic development to protect the unknown life-saving potential locked in the tropical forests.

*Debt-for-Nature Swaps* – \$37 million, almost three times current funding, to save threatened forests while relieving developing country debt. Under the Tropical Forest Conservation Act (TFCA), the United States can grant reduction of debt owed by developing countries when they commit to invest local currency in conservation of tropical forests and promote economic reform. Under the TFCA, debt can be reduced through debt buybacks, swaps, and debt cancellation. Interest payments on the remaining debt will be channeled into local currency funds supporting tropical forest conservation programs. Priority countries for these innovative debt-for-nature swaps could include countries such as Bangladesh, Peru, and the Philippines.

*Protection of Endangered Species* – \$3 million, a 50 percent increase, for U.S. Fish and Wildlife Service International Biodiversity Conservation programs that help other countries conserve wildlife and protect global biodiversity. The budget includes an increase in funding for:

- Implementation of the African Elephant Conservation Act, Asian Elephant Conservation Act, and Rhino/Tiger Conservation Act. Each of these laws establishes a fund for assistance to African and Asian countries that harbor these species, to be matched by contributions from other governments and private organizations. Projects will include activities such as providing anti-poaching patrols in national parks and reserves, developing community outreach programs to involve local villagers in conservation, and conducting monitoring programs for populations of elephants, rhinos, and tigers.

*Expanded Research and Wildlife Protections* – \$10 million, more than three times current funding, for the International Programs Office of the Forest Service to give additional technical assistance for sustainable forest management and tropical forest conservation. Programs will focus on:

- Promoting the establishment and preservation of protected areas in tropical forests, including boundary demarcation, skills training, monitoring site status and management effectiveness, and buffer zone management;
- Working with domestic and international partners to restore and maintain critical habitat areas for the protection of migratory species; and
- Expanding research on the causes and prevention of wild forest fires, such as those that devastated parts of Mexico, Brazil, and Indonesia over the last several years.

Monitoring Forest Loss from Space -- A new program led by NASA and USAID to use satellite imagery to compile the first comprehensive maps of the world's tropical forests. These agencies will work with national and international partners, including the Forest Service and the U.S. Geological Survey, to provide the tools for regularly monitoring and reporting on future changes in forest cover. This new effort will provide governments, scientists and conservationists accurate information for maximizing forest protection investments and safeguarding these unique and valuable ecosystems for future generations.

| <b>Agency</b>                       | <b>2000</b>                                | <b>2001</b> | <b>Increase</b> | <b>% Increase</b> |
|-------------------------------------|--------------------------------------------|-------------|-----------------|-------------------|
|                                     | (Budget authority, in millions of dollars) |             |                 |                   |
| AID tropical forests & biodiversity | 62                                         | 100         | 38              | 61%               |
| TFCA (debt swaps)                   | 13                                         | 37          | 24              | 185%              |
| US Fish & Wildlife Service          | 2                                          | 3           | 1               | 50%               |
| US Forest Service                   | 3                                          | 10          | 7               | 233%              |
| <b>Total</b>                        | <b>80</b>                                  | <b>150</b>  | <b>70</b>       | <b>88%</b>        |

**CLINTON-GORE LIVABILITY INITIATIVE:  
BUILDING LIVABLE COMMUNITIES FOR THE 21<sup>ST</sup> CENTURY**

"Our role is to expand the choices available to communities -- not to dictate solutions. By providing new tools and resources, we can help communities create the future they want."  
--Vice President Gore, Dec. 6, 1999

The Administration's Livable Communities Initiative, launched last year by Vice President Gore, is designed to help communities across America grow in ways that ensure both a high quality of life and strong, sustainable economic growth. This initiative will strengthen the federal government's role as a partner with the growing number of state and local efforts to build "livable communities" for the 21st century.

Key elements of the \$9.3 billion Livable Communities Initiative, included in President Clinton's proposed FY 2001 budget, include: \$9.1 billion for transportation systems, \$25 million for regional smart growth efforts, and \$125 million to fund crime solving technologies to improve community safety. The initiative also includes a tax credit proposal calling for \$10.75 billion in bonding authority over five years for Better America Bonds. The proposed FY 2001 funding for the Livable Communities initiative represents a 14 percent increase over last year.

**Livability Goals**

The Clinton-Gore Livable Communities Initiative aims to help citizens and communities:

- Preserve green spaces that promote clean air and clean water, sustain wildlife, and provide families with places to walk, play and relax.
- Ease traffic congestion by improving road planning, strengthening existing transportation systems, and expanding use of alternative transportation.
- Restore a sense of community by fostering citizen and private sector involvement in local planning.
- Promote collaboration among neighboring communities -- cities, suburbs or rural areas -- to develop regional growth strategies and address common issues like crime.
- Enhance economic competitiveness by nurturing a high quality of life that attracts well-trained workers and cutting-edge industries.

**FY 2001 Livability Initiatives**

The President's FY 2001 budget request to Congress includes significant new investments to support major livability programs:

- **Community Transportation Choices.** The budget submission includes a record \$9.1 billion to help ease traffic congestion and reduce pollution -- a \$1.1 billion increase over last year's funding level. This item includes \$6.3 billion for mass transit, \$1.6 billion for congestion relief and air quality improvement, \$719 million for community transportation enhancements, \$468 million to improve passenger rail service, and \$52 million for the Transportation and Community and System Preservation pilot program. The funding will reduce traffic congestion and improve air quality by enhancing transit services and

supporting other transportation alternatives, such as high-occupancy vehicle lanes, ridesharing, bicycle and pedestrian paths, and cleaner fuels fleets. The funding will also promote more livable communities by encouraging states and localities to coordinate land use plans and transportation.

- **Better America Bonds.** The President's budget will propose \$10.75 billion in bonding authority over five years for Better America Bonds – more than a \$1 billion increase over last year's proposal. The proposal would allocate \$2.15 billion in annual bond authority over the next five years at a cost of approximately \$700 million. The bonding authority would allow state, local and tribal governments to finance projects that preserve green space, create or restore urban parks, protect water quality, and clean up brownfields. The tax credit bonds mature in 15 years and the Federal Government would provide tax credits in lieu of interest payments to bondholders – making the bonds interest free for local communities.
- **Regional Connections Initiative.** The budget includes \$25 million to fund the Department of Housing and Urban Development's proposed Regional Connections Initiative. The program will promote regional "smart growth" strategies and complement the Administration's other regional efforts. Regional Connections matching grants will help local partnerships design and pursue smarter growth strategies across jurisdictional lines. Legislation to authorize this program has been introduced in Congress.
- **Crime Solving Technologies to Improve Community Safety.** The budget includes \$125 million to fund state and local grants through the Department of Justice for crime-solving technologies to improve public safety. These programs will upgrade and computerize State and local criminal history records, improve crime laboratories, and reduce DNA sample backlog.
- **Community-Federal Information Partnership --** A \$50 million program funded by several agencies to provide communities with grants and technical assistance for easy-to-use information tools to help develop strategies for future growth.

The Livable Communities Initiative integrates the commitments of more than a dozen Federal agencies. The Initiative also supplements the various programs that make up the Administration's Community Empowerment Agenda, which is designed to encourage reinvestment in existing communities and provide greater opportunity for their residents.

As part of last year's livability budget, the Administration requested an additional \$1.3 billion in appropriations. Of this, Congress enacted more than \$600 million, primarily for transportation.



**THE WHITE HOUSE**

**Office of the Vice President**

**For Immediate Release  
Friday, January 7, 2000  
456-7035**

**Contact:  
(202)**

**VICE PRESIDENT GORE ANNOUNCES ADMINISTRATION WILL SEEK  
OVER \$1 BILLION TO MAKE CONSERVATION PAYMENTS TO FARMERS  
AND PROTECT THE ENVIRONMENT**

Washington, DC -- Vice President Al Gore announced today that the Administration will seek nearly \$1.3 billion in the FY 2001 budget for conservation programs that help family farmers take steps to protect water quality and the environment and to preserve farmland pressured by sprawl. This conservation package is part of a larger Administration budget proposal to strengthen the farm safety net.

"Farmers are among the most important stewards of our land and water. Despite the accomplishments made in recent years in stopping soil erosion and protecting water quality, agriculture's environmental challenges are multiplying. The initiatives that I am announcing today will provide needed financial support to our family farmers as well as tremendous environmental benefits for the American people. "

The centerpiece of the proposal is a new \$600 million program providing additional income to family farmers who voluntarily adopt comprehensive plans to curb erosion and protect water supplies from pesticide and nutrient runoff.

An additional \$125 million will be used to provide additional opportunities for farmers to benefit through USDA's Conservation Reserve Program (CRP) for farmers to establish buffer strips along waterways to improve water quality. The proposal also asks Congress to expand CRP so that an additional 4 million acres of farmland (for a total of 40 million acres) may be enrolled in the program.

An additional \$550 million will be used to strengthen several other USDA programs to assist farmers with conservation and environmental efforts. These programs include the Environmental Quality Incentives Program, Wetlands Reserve Program, and Wildlife Habitat Incentives Program. This funding also will be used to expand technical assistance for farmers and ranchers for conservation efforts and expand the Farmland Protection Program.

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**THE WHITE HOUSE**  
**Office of the Vice President**

**For Immediate Release**  
**Monday, January 10, 2000**

**Contact:**  
**(202) 456-7035**

**VICE PRESIDENT AL GORE ANNOUNCES ADMINISTRATION WILL SEEK  
\$50 MILLION TO HELP RESTORE THE GREAT LAKES**

Washington, DC -- Vice President Al Gore announced today that the Administration will propose a new \$50 million initiative in its fiscal year 2001 budget to help restore the beauty and livability of our nation's Great Lakes.

Under the proposal, Great Lakes communities -- such as Detroit, Milwaukee, Cleveland, Gary, Duluth, and Buffalo -- would be eligible for matching grants to help them restore and protect their waterways for drinking, fishing, swimming, boating and urban redevelopment.

"The Great Lakes are among our nation's most cherished natural treasures. We have made tremendous progress in restoring the quality of their waters, but much remains to be done," said Vice President Gore. "Today, we are proposing a major new partnership with Great Lakes communities to help restore their treasured lakes and enhance their livability. Working together, we can continue to improve water quality, redevelop some of our nation's oldest urban centers, and protect the health of millions of Americans who use and enjoy the Great Lakes every year."

The proposed initiative would provide \$50 million in matching grants to state and local governments to clean up contaminated sediments, control stormwater, restore wetlands, acquire greenways and buffers, and control polluted runoff. The funds would be awarded by the Environmental Protection Agency through a competitive grant process. State or local governments would be required to provide at least 40 percent of project costs, resulting in a total investment of more than \$80 million.

States or municipalities will use the funds to address existing "areas of concern" that were defined in 1987 by the International Joint Commission -- a joint partnership between the United States and Canada. There are 42 designated "areas of concern" around the Great Lakes Basin where the aquatic environment has been most severely affected. Of the 42 "areas of concern," 26 are located exclusively in the United States, five are in waters shared by the U.S. and Canada, and the remaining 12 are located exclusively in Canada. All of these areas have significant water pollution problems that restrict fishing, swimming, boating, and use for drinking water. Most are in older, urban communities confronting a range of pollution problems that detract from their livability by making it difficult to attract new industries and restricting access to water and open space.

For over a decade, the governments of Canada and the United States have been working with local governments, private industry, and community organizations to develop cleanup plans to restore and protect water quality in these 42 areas. While virtually all of these areas have

developed detailed restoration plans and initiated significant environmental protection efforts, funding shortfalls have acted as a roadblock to achieving cleanup goals. The new grants proposed by the Clinton-Gore Administration would help speed implementation of existing cleanup plans here in the U.S. and within shared waters.

The Environmental Protection Agency's fiscal year 2000 budget includes \$17 million for research, demonstration projects and other efforts to support Great Lakes cleanup. The Administration will propose continuing this funding in fiscal year 2001.

Surrounded by rich farmlands and growing urban centers, the Great Lakes are home to over 25 million Americans. Many people use the Great Lakes as a source of drinking water. In addition, millions enjoy the recreational opportunities provided by the Great Lakes each year, including boating, fishing, and sightseeing. The Great Lakes also sustain a rich diversity of birds and other wildlife; an estimated three million birds migrate through the Great Lakes each year, relying on the lakes for their food and shelter.

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### Great Lakes "Areas of Concern"

|                   |                     |                      |                             |
|-------------------|---------------------|----------------------|-----------------------------|
| <b>Illinois:</b>  | Waukegan Harbor     | <b>New York:</b>     | Buffalo River               |
| <b>Indiana:</b>   | Grand Calumet River |                      | Eighteen Mile Creek         |
| <b>Michigan:</b>  | Clinton River       |                      | Niagara River               |
|                   | Deer Lake           |                      | Oswego River/Harbor         |
|                   | Detroit River       |                      | Rochester Embayment         |
|                   | Kalamazoo River     |                      | St. Lawrence River          |
|                   | Manistique River    | <b>Ohio:</b>         | Ashtabula River             |
|                   | Muskegon            |                      | Black River                 |
|                   | River Raisin        |                      | Cuyahoga River              |
|                   | Rouge River         |                      | Maumee River                |
|                   | Saginaw River/Bay   | <b>Pennsylvania:</b> | Presque Isle Bay            |
|                   | St. Clair River     | <b>Wisconsin:</b>    | Lower Green Bay & Fox River |
|                   | St. Marys River     |                      | Menominee River             |
|                   | Torch Lake          |                      | Milwaukee Estuary           |
|                   | White Lake          |                      | Sheboygan River             |
| <b>Minnesota:</b> | St. Louis River     |                      |                             |

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# # #

**WHITE HOUSE ANNOUNCES MAJOR NEW INCREASE IN FUNDING TO DETERMINE  
ENVIRONMENTAL CAUSES OF DISEASE  
FUNDING WILL PROVIDE NEW INSIGHT INTO THE CAUSES OF  
BREAST AND PROSTATE CANCER**

*January 13, 2000*

Today, the White House will announce that the President's FY 2001 budget will include an unprecedented funding increase to explore the largely unknown environmental causes of diseases, like breast and prostate cancer. This major initiative, which is advocated by the American Cancer Society and the American Academy of Pediatrics, will provide \$27 million, 56 percent greater than last year's funding level, for the Centers for Disease Control and Prevention (CDC) Environmental Health Lab to: assist communities investigating unusual incidence of cancer or other diseases; identify regions of the country in which individuals are at increased risk of dangerous exposure to carcinogens and other toxic substances; and ensure rapid evaluation of the impact of public health emergencies. Because of the startling lack of evidence pinpointing the environmental cause of cancers and many other diseases, these studies should play a major role in determining new, more effective diagnostic tests and preventive techniques.

**ENVIRONMENTAL CONDITIONS ARE LINKED TO INCREASED INCIDENCE OF CANCER AND OTHER DISEASES.** Studies tracking patterns of cancer development and birth defects suggest the influence of environmental factors.

**Environmental contaminants are associated with a wide range of birth defects and other diseases.** Of the 120,000 U.S. babies born each year with a birth defect, 8,000 die during their first year of life, making birth defects the leading cause of infant mortality in the United States and contributing substantially to childhood morbidity and long-term disability. Hundreds of thousands of cases of asthma and lead poisoning are also associated with environmental contaminants.

**Initial scientific evidence demonstrates that increased risk of breast cancer may be associated with unknown environmental factors.** According to the American Cancer Society, one out of nine American women will develop breast cancer in her lifetime, and breast cancer is now the leading cause of cancer for women between the ages of 35 and 54. Despite decades of research, over half of all breast cancer cases cannot be explained by known risk factors, such as genetic predisposition, reproductive history, and diet.

**Initial scientific evidence demonstrates that increased risk of prostate cancer may be associated with unknown environmental factors.** Prostate cancer is the most common type of cancer found in American men other than skin cancer, and disproportionately impacts African-American men. Researchers estimate that there will be about 180,000 new cases of prostate cancer in the United States this year, 36 percent of all cancer cases, and that about 37,000 men will die of this disease. However, researchers estimate that only 10 percent of prostate cancers are due to genetic predisposition.

**Lack of research on the association between environmental exposure and breast cancer, prostate cancer, and other diseases represents a lost opportunity to improve public health.** Research on the impact of environmental contaminants on individual health will promote the development of improved diagnostic techniques, prevention strategies, and treatments. If exposure to chemicals in the environment was shown to be associated with only 10 percent of breast and prostate cancer cases, and the identified hazards were reduced and eliminated, the development of these diseases in 30,000 men and women could potentially have been prevented each year.

-more-

**Biomonitoring provides the critical information necessary to link exposure and disease.**

Biomonitoring is the measurement of toxic substances in the human body, providing information necessary to link exposure to a toxic substance and the development of diseases such as cancer and a wide range of birth defects. It identifies which groups of people are in the most danger from toxic substances, evaluates the success of preventive actions, and improves the response of public health officials to emergencies. This technique, combined with the application of new advances in determining the genetic causes of disease, will inevitably lead to striking developments in treating and preventing cancer and other diseases.

**CLINTON-GORE ADMINISTRATION MAKES MAJOR NEW INVESTMENT TO INVESTIGATE THE ENVIRONMENTAL CAUSES OF CANCER AND OTHER DISEASES.**

Today, the White House will announce that the President's FY 2001 budget will include a \$27 million investment to:

**Double the level of assistance provided to state and local public health officials investigating adverse health events potentially linked to environmental exposures.** This new investment will allow epidemiologists and toxicologists at the CDC's Environmental Health Lab to double the level of critical technical support to communities to investigate increased incidence of cancer or other diseases potentially linked to toxic environmental exposures. As part of these interventions, the CDC will test the exposure of thousands of individuals to toxic substances to determine the cause of their illness. Studies that evaluate increased risk of cancer or birth defects from exposure to potential carcinogens or toxic substances will be given funding priority. When dangerous exposures are identified, CDC will work with local public health officials to take all measures necessary to protect residents from further harm.

**Identify regions of the country where individuals are exposed to toxic substances that cause cancer and other diseases.** Although the Environmental Health Lab has conducted studies that link exposure to the pesticide dieldrin to increased risk of breast cancer and polychlorinated biphenyls (PCBs) to increased risk non-Hodgkins lymphoma, there is currently no way to determine the national level of exposure to these dangerous substances. These new funds will allow for the routine conduct of nationwide monitoring of over 100 potentially toxic substances, including dieldrin, PCBs, and over 70 other potential carcinogens. This initiative will assess exposure to these dangerous substances among women of childbearing age, children, minorities, and the elderly and will develop a blueprint for action to prevent dangerous exposures in the future.

**Ensure rapid evaluation of the impact of public health emergencies.** This new initiative will also ensure that the CDC's Environmental Health Lab, together with state and local public health officials, can immediately address public health emergencies, such as widespread exposure to a toxic substance through a chemical spill or contamination of a product through a manufacturing error. Together with epidemiologists, toxicologists, and other public health personnel, the lab will conduct a comprehensive investigation to identify all sources of contamination and work with local officials to protect residents from further exposure. For example, when methyl parathion, a lethal pesticide, was illegally sprayed in thousands of homes during 1996 and 1997, the Environmental Health Lab created a new method to test for the presence of this dangerous substance and provided the laboratory support services and scientific expertise necessary to prioritize medical treatment and determine which homes should be evacuated. The funds announced today will enable the CDC to respond swiftly to future emergencies.

**Table 4-1. HIGH-PRIORITY ENVIRONMENTAL AND NATURAL RESOURCE PROGRAMS**  
(Budget authority; in millions of dollars)

|                                                                            | 1993<br>Actual | 1999<br>Actual | 2000<br>Estimate | 2001<br>Proposed | Change:<br>1993 to<br>2001 | Change:<br>2000 to<br>2001 |
|----------------------------------------------------------------------------|----------------|----------------|------------------|------------------|----------------------------|----------------------------|
| <b>Lands Legacy Initiative (DOI, USDA, NOAA)</b>                           | 380            | 473            | 727              | 1,400            | 1,020                      | 673                        |
| <b>Farm Conservation Initiative (USDA) (mandatory) 1/</b>                  | 1,584          | 1,797          | 1,851            | 3,099            | 1,515                      | 1,248                      |
| <b>Clean Energy Initiative (DOE, USDA, AID, DOC, TDA, EX-IM)</b>           | 251            | 286            | 294              | 490              | 239                        | 196                        |
| <b>Greening the Globe Initiative (AID, Treasury, USDA)</b>                 | 82             | 65             | 80               | 150              | 68                         | 70                         |
| <b>Great Lakes Initiative (EPA)</b>                                        | 18             | 18             | 17               | 67               | 49                         | 50                         |
| <b>Climate Change Technology Initiative (DOE, EPA, USDA, HUD)</b>          | ---            | 1,021          | 1,099            | 1,432            | 1,432                      | 333                        |
| <b>Clean Water Action Plan (EPA, USDA, DOI, NOAA, Corps)</b>               | ---            | 1,871          | 1,998            | 2,426            | 2,426                      | 428                        |
| <b>Salmon Habitat Restoration (NOAA, Corps)</b>                            | ---            | 95             | 151              | 251              | 251                        | 100                        |
| <b>Endangered Species Act (DOI, NOAA)</b>                                  | 75             | 129            | 152              | 170              | 95                         | 18                         |
| <b>Department of Transportation (DOT):</b>                                 |                |                |                  |                  |                            |                            |
| Mass Transit                                                               | 3,774          | 5,389          | 5,785            | 6,321            | 2,547                      | 536                        |
| Congestion Mitigation and Air Quality (CMAQ)                               | 601            | 1,408          | 1,509            | 1,557            | 956                        | 48                         |
| Environmental Enhancements; Preservation Pilots                            | 114            | 646            | 720              | 771              | 657                        | 51                         |
| Subtotal, DOT (Select programs)                                            | 4,489          | 7,443          | 8,014            | 8,649            | 4,160                      | 635                        |
| <b>Department of the Interior (DOI):</b>                                   |                |                |                  |                  |                            |                            |
| National Park Service Operating Program                                    | 984            | 1,286          | 1,364            | 1,454            | 470                        | 90                         |
| Bureau of Land Management Operating Program                                | 638            | 716            | 743              | 819              | 181                        | 76                         |
| Fish & Wildlife Service Operating Program                                  | 551            | 660            | 703              | 762              | 251                        | 59                         |
| Subtotal, DOI (Select programs)                                            | 2,153          | 2,662          | 2,810            | 3,035            | 882                        | 225                        |
| <b>Department of Agriculture (USDA):</b>                                   |                |                |                  |                  |                            |                            |
| Forest Service Operating Program                                           | 1,319          | 1,595          | 1,668            | 1,790            | 471                        | 122                        |
| Natural Resources Conservation Service Operating Program                   | 577            | 641            | 661              | 747              | 170                        | 86                         |
| Water/Wastewater Grants and Loans                                          | 508            | 645            | 651              | 648              | 140                        | 17                         |
| Subtotal, USDA (Select programs)                                           | 2,404          | 2,881          | 2,960            | 3,185            | 781                        | 225                        |
| <b>Environmental Protection Agency (EPA):</b>                              |                |                |                  |                  |                            |                            |
| Operating Program                                                          | 2,767          | 3,496          | 3,532            | 3,917            | 1,150                      | 385                        |
| Clean Air Partnership Fund                                                 | ---            | ---            | ---              | 85               | 85                         | 85                         |
| Superfund Orphan Share (mandatory)                                         | ---            | ---            | ---              | 150              | 150                        | 150                        |
| Subtotal, All EPA                                                          | 6,923          | 7,589          | 7,563            | 7,407            | 484                        | -156                       |
| <b>Department of Energy (DOE):</b>                                         |                |                |                  |                  |                            |                            |
| Energy Conservation and Efficiency (gross)                                 | 592            | 692            | 745              | 851              | 259                        | 106                        |
| Solar and Renewable Energy R&D (net)                                       | 249            | 336            | 315              | 410              | 161                        | 95                         |
| Federal Facilities Cleanup (Environmental Management Program)              | 6,396          | 5,843          | 5,878            | 6,518            | -78                        | 440                        |
| Subtotal, DOE (Select programs)                                            | 7,237          | 6,871          | 6,938            | 7,579            | 342                        | 641                        |
| <b>Department of Defense (DOD):</b>                                        |                |                |                  |                  |                            |                            |
| Cleanup                                                                    | 1,604          | 1,962          | 1,634            | 2,178            | 574                        | 544                        |
| Environmental Compliance/Pollution Prevention/Conservation                 | 2,227          | 2,434          | 2,337            | 2,159            | -88                        | -198                       |
| Subtotal, DOD (Select programs)                                            | 3,831          | 4,396          | 3,971            | 4,317            | 486                        | 346                        |
| <b>National Oceanic and Atmospheric Administration (NOAA):</b>             |                |                |                  |                  |                            |                            |
| Fisheries and Protected Species                                            | 232            | 350            | 396              | 431              | 199                        | 35                         |
| Ocean and Coastal Management                                               | 121            | 178            | 188              | 314              | 193                        | 126                        |
| Ocean and Atmospheric Research                                             | 202            | 287            | 301              | 303              | 101                        | 2                          |
| Subtotal, NOAA (Select programs)                                           | 555            | 815            | 885              | 1,048            | 493                        | 163                        |
| <b>Partnership for a New Generation of Vehicles (DOE, DOC, NSF, EPA, D</b> | ---            | 235            | 226              | 255              | 255                        | 29                         |
| <b>U.S. Global Change Research (NASA, DOE, NSF, DOC, USDA, others)</b>     | 1,323          | 1,657          | 1,701            | 1,740            | 417                        | 39                         |
| <b>GLOBE -- Global Environmental Education (NOAA, NASA, EPA, NSF)</b>      | ---            | 10             | 11               | 13               | 13                         | 2                          |
| <b>Montreal Protocol (State/EPA)</b>                                       | 25             | 45             | 40               | 49               | 24                         | 9                          |
| <b>Global Environment Facility (Treasury)</b>                              | ---            | 168            | 36               | 176              | 176                        | 140                        |
| <b>Multilateral and Bilateral Assistance (International Programs/AID)</b>  | 529            | 278            | 279              | 301              | -28                        | 22                         |
| <b>Total 2/</b>                                                            | <b>31,226</b>  | <b>37,685</b>  | <b>38,404</b>    | <b>42,527</b>    | <b>11,301</b>              | <b>4,123</b>               |

1/ Increase over 2001 authorized level is \$1.3 billion; includes funding for the Conservation Reserve Program (CRP).

2/ Total includes mandatory spending. Total adjusted to eliminate double counts.



# American Council for an Energy-Efficient Economy

WASHINGTON, DC

## PRESS RELEASE

For Immediate release  
February 7, 2000

For Further Information Contact:  
Howard Geller 202-429-8873

### **Administration Budget on Climate and Energy is Welcomed**

Washington, DC – The Clinton Administration's new budget initiatives to combat global warming and use energy more efficiently are "solid investments that will pay enormous returns to US citizens and businesses" according to Howard Geller, Executive Director of the non-profit American Council for an Energy-Efficient Economy. "Evidence of the need for action to reduce greenhouse gas emissions has become more convincing with each passing month," noted Geller. "These constructive proposals for initiatives led by the US Department of Energy, EPA, and other agencies should be supported by the Congress."

Geller pointed out that in addition to continuing several promising programs to improve the energy efficiency of buildings, vehicles, and industrial plants here in the US, the Administration is seeking funding to encourage the development and installation of clean energy technology in markets overseas. "Through greater energy efficiency, developing nations can improve living standards and protect the global climate," said Geller. "When energy is used more efficiently around the world, we all benefit from greater economic productivity, increased global trade, and reduced risk of oil price shocks."

In years past, Congress has failed to meet the President's requests to accelerate research and deployment of clean energy technologies – energy efficiency and renewable energy – forcing President Clinton to fight hard for modest increases in these programs. But this year may be different, according to Geller. "Clean energy technologies are extremely popular with the public. And they are the most cost-effective way of cutting pollution. This may be the year when the Congress finally gets the message that enhancing both the economy and the environment with effective energy-saving programs is good policy, as well as good politics," said Geller.

**About ACEEE:** The American Council for an Energy-Efficient Economy is a non-profit organization established in 1980 and dedicated to advancing energy efficiency as a means of promoting both economic prosperity and environmental protection. A diverse group of foundations, private companies, utilities, and federal and state agencies provide funding for ACEEE's work. For more information, visit the ACEEE web site at [<http://aceee.org>](http://aceee.org).

## **FY01 Climate Change Budget Briefing**

- Introduction Roger
- Admin. Budget Overview Elgie
- Climate Budget Highlights Roger
  - int'l clean energy initiative
  - bioenergy
  - the rest of the budget
- USCGRP Neal Lane
- John Beale, David Leiter, and Gerry Gerardi will be available to answer questions.



John D. Gibson

 02/07/2000 11:30:46 AM

Record Type: Record

To: Elwood Holstein/OMB/EOP@EOP  
cc: See the distribution list at the bottom of this message  
Subject: Climate Budget Rollout – Final Paper, etc.

Elgie, as you know, you'll be giving an overview of the climate budget at the 1:30 rollout. We wanted to make sure that you had the final paper describing the climate budget and suggest some talking points. I know that there's a lot of ways to slice up these nos. and thought it would be helpful for you to see the way they were presented in the paper. Suggested talking points:

1. Total climate package includes \$4.2 billion -- a \$760 million increase over FY00 enacted.
2. Climate solutions budget totals \$2.4 billion -- a 43% increase over FY00 enacted. Reflects POTUS' & VPOTUS' strong commitment to addressing climate change -- overall budget is only up \_\_\_\_%
3. Lots of competition for scarce resources and fair to say that the climate budget came out very well in this competition. Again, reflection of President and Vice-President's commitment.
4. Climate package includes a series of new initiatives:
  - Over \$200 million for accelerated efforts to promote the development and deployment of clean energy technologies around the world;
  - \$289 million for a stepped-up program to develop bioenergy and bio-based products;
  - \$85 for a new Clean Air Partnership Fund to boost state and local efforts to reduce both greenhouse gases and ground-level air pollutants.
5. Also includes Climate Change Technology Initiative (CCTI), which mixes tax incentives and direct spending to spur the research, development, and deployment of energy efficient technology and renewable energy -- both the tax and the spending side are significantly up in this year's budget.
6. The President is also proposing over \$1.7 billion for the United States Global Change Research Program, to enhance our understanding of the human and natural forces that influence the Earth's climate system.

## **RSB Talking Points – Climate Budget Briefing February 7, 2000**

**Thank you, Elgie.**

**As Elgie said – 43% increase in climate budget reflects President and Vice-President's strong commitment to this issue.**

**Want to expand a bit on the highlights of this budget that Elgie previewed for us and then leave plenty of time to answer your questions.**

### **Over \$200 million for International Clean Energy Initiative.**

- **Will accelerate the development & deployment of clean energy technologies around the world.**
- **Multi-agency initiative to:**
  - **encourage open competitive markets;**
  - **remove market barriers in developing countries to clean energy;**
  - **provide new incentives for clean energy innovation and export;**
  - **look for ways to streamline bureaucracy supporting clean energy exports.**
- **Initiative will:**
  - **promote U.S. clean energy exports;**
  - **create high-value jobs;**
  - **assist developing countries in fighting air pollution & climate change.**

### **Almost \$290 million for Bioenergy & Bio-based Products Initiative.**

- **Seeks to accelerate bio-based technologies that convert crops, trees and other biomass into fuels and products.**
- **Supports and follows thru on POTUS August EO.**

- Initiative represents increase of \$93 million over FY 2000 enacted levels.
- Will help address global warming while also:
  - increasing viability of alternative energy sources;
  - supporting farm incomes;
  - diversifying and strengthening the rural economy.

#### **\$85 million for Clean Air Partnership Fund.**

- Will provide grants to state and local governments for projects that reduce both greenhouse gases and pollutants like soot, smog, and air toxics.
- Also proposed last year – optimistic it will fare better this year.

#### **Centerpiece of POTUS program remains CCTI.**

- Package of targeted tax incentives and investments.
- Saves consumers money & reduces ghg emissions at the same time.
- CCTI investments have risen substantially each of the past 2 years. The President's new budget proposes a still more accelerated effort.
- Tax Package -- \$4.0 billion over 5 years (up \$400 million from last year).
  - **Homes & Appliances.**
    - \$1000-2000 for purchase of a new energy efficient home;
    - 20% credit for selected energy efficient products;
    - \$1000-2000 credit for installing a solar energy system.
  - **Cars.**
    - Extends current tax credit (of up to \$4000) thru 2006 for qualified electric & fuel cell vehicles
    - \$500-3000 for qualifying hybrid vehicle from 2003-2006.
  - **Clean energy.**
    - Extends 1.5 cent/kwh credit for wind & closed-loop biomass;
    - Credits for open-loop biomass & coal-biomass cofiring;

- Credits for electricity from methane from certain landfills.
- CCTI Investment Package -- \$1.4 billion to research, develop, and deploy clean technologies.
  - 30% increase over the amount appropriated in FY 2000.
  - PNGV -- \$255 million -- up \$30 million from FY 2000.
  - PATH -- total request of building efficiency efforts totals \$275 million -- up 42% from FY 2000.
  - Clean Energy -- \$410 for DOE's solar and renewable programs -- 32% increase over FY 2000.

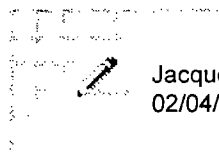
#### **Other Climate-Related Spending.**

- Cleaner Fossil Fuels -- \$233 million for R&D to develop next-generation technologies for coal combustion.
- Weatherization & State Energy Grants -- \$191 million -- a \$22 million increase over FY 2000 appropriations.

#### **U.S. Global Change Research Program.**

- Over \$1.7 billion for basic climate scientific research.
- Reflects Admin.'s continuing commitment to ensuring that climate policy is based on sound science.
- Good place for me to stop and turn it over to Neal Lane who will explain to us what's included in this package.

**Thank you very much.**



Jacqueline Krieger  
02/04/2000 05:18:51 PM

Record Type: Record

To: Roger S. Ballentine/WHO/EOP@EOP  
cc: Jefferson B. Seabright/WHCCTF/EOP@EOP, David Gardiner/CEQ/EOP@EOP, Angela C. Mizeur/WHO/EOP@EOP  
Subject: Monday's Climate Budget Briefing

Roger - For the climate budget briefing on Monday (1:30 - 2:00 in CEQ conference room), here is tentative agenda. As the time slot is short, I've told everyone to stick to highlights, have staff present for questions. Let me know what you think.

- Introduction Roger Ballentine
- Budget Overview Elgie Holstein
- New Initiatives (int'l/bioenergy) Roger Ballentine
- Tax Gerry Gerardi
- DOE (ee, re, PATH) ?? (for Reicher)
- EPA (CAPF, PNGV, E-Star) John Beale (for Perciasepe)
- GCRP Neal Lane/Rosina Bierbaum

Reicher and Perciasepe cannot attend (both DOE and EPA have their agency briefings at the same time). I still haven't heard from DOE who will be there in Reicher's place. John Beale, EPA/OAR's deputy administrator for climate, will be there for Perciasepe (he's new to all of this). Margot Anderson will be present in case there are any questions on USDA's programs. Lance and Becka made calls inviting approx. 60 of our key contacts (enviros, industry, etc.) -- it's hard to say how many will show up -- given the size of the room, maybe less is better.

# President Clinton's FY 2001 Climate Change Budget

The President's climate change package for FY 2001 totals over \$4.1 billion – an increase of \$760 million from the amount enacted for FY 2000. This includes \$2.4 billion for programs directly aimed at combating global warming – a 43 percent increase over FY 2000 enacted levels. This includes a series of new initiatives, such as accelerated efforts to promote the development and deployment of clean energy technologies around the world; a stepped-up program to develop bioenergy and bio-based products; and a new Clean Air Partnership Fund to boost state and local efforts to reduce both greenhouse gases and ground-level air pollutants. It also includes the Climate Change Technology Initiative (CCTI), which mixes tax incentives and direct spending to spur the research, development, and deployment of energy efficient technology and renewable energy and other climate-related investments, such as R&D of highly efficient technologies for the combustion and use of coal and natural gas, weatherization, and state energy grants. The President is also proposing over \$1.7 billion for the United States Global Change Research Program, to enhance our understanding of the human and natural forces that influence the Earth's climate system.

**Table 1. Climate Change-Related Domestic Programs (\$ in Millions)**

|                                                                                                        | <b>FY 2000<br/>Enacted</b> | <b>FY 2001<br/>Request</b> | <b>Change</b> |
|--------------------------------------------------------------------------------------------------------|----------------------------|----------------------------|---------------|
| Climate Change Solutions                                                                               |                            |                            |               |
| International Clean Energy Initiative                                                                  | 98                         | 201                        | +103          |
| Biofuels & Bioproducts Initiative                                                                      | 196                        | 289                        | +93           |
| Clean Air Partnership Fund                                                                             | 0                          | 85                         | +85           |
| Climate Change Technology Initiative--tax incentives <sup>1</sup>                                      | N/A                        | 201                        | +201          |
| Climate Change Technology Initiative--investments                                                      | 1,095                      | 1,432                      | +337          |
| Other Climate-Related Investments (cleaner coal &<br>Natural gas; weatherization; state energy grants) | 413                        | 424                        | +11           |
| Subtotal, Climate Solutions <sup>2</sup>                                                               | 1,665                      | 2,386                      | +721          |
| Global Change Research Program                                                                         | 1,701                      | 1,740                      | +39           |
| <b>TOTAL</b>                                                                                           | <b>3,366</b>               | <b>4,126</b>               | <b>+760</b>   |

<sup>1</sup> First year of a proposed five year, \$4.0 billion package.

<sup>2</sup> Subtotal excludes double counts for funds included in new initiatives and cleaner coal which are also part of the CCTI.

# International Clean Energy Initiative

To accelerate the development and deployment of clean energy technologies around the world, President Clinton is proposing the International Clean Energy Initiative – a \$200 million multi-agency effort (a more than 100 percent increase over FY 2000 enacted levels) to encourage open competitive markets and remove market barriers to clean energy technologies in developing and transition countries and to provide new incentives for clean energy technology innovation and export. This initiative will promote U.S. exports and create high-value jobs, and will assist countries to power their economic development while fighting air pollution and climate change.

***Window of Opportunity for America and the World.*** Developing country energy use will overtake that of industrial countries by 2020. These energy technology markets are projected to total \$4 to \$5 trillion over the next 20 years and \$15 to \$25 trillion over the next 50 years. Developing country energy use is expected to account for three-fourths of the increase in global energy use between now and 2050.

Advanced, low-polluting energy technologies, developed and manufactured in the United States, can provide these energy services efficiently, but existing markets often do not value environmental and efficiency benefits. In addition, environmentally superior options often carry higher up-front costs, may be unfamiliar, or are perceived as more risky by decision-makers in developing countries. The initiative builds on a recent set of recommendations by the President's Committee of Advisors on Science and Technology (PCAST) and is directed at leveling the playing field between cleaner U.S. energy technologies and services and polluting alternatives.

***Real Benefits At Home and Abroad.*** The initiative will help lay the technical and policy foundation that will allow developing and transition countries to build a clean energy future, leapfrogging past the polluting energy technologies used by the industrial countries, while building competitive markets open to U.S. firms. The goals of this initiative include:

- Doubling clean energy technology exports by 2005, creating as much as \$5 billion in new export revenues for U.S. companies and as many as 100,000 new U.S. jobs.
- Cutting energy use in targeted country buildings and appliances in half through advanced building design tools and building equipment codes and standards.
- Developing integrated renewable energy technologies that have the potential to power the full range of energy services for the 2 billion people in developing countries that do not now have electricity.
- Sharply reducing sulfur, particulate, and greenhouse gas emissions by developing advanced coal-fired power plants and low-cost hydrogen fuels.

- Maximizing use of combined heat & power systems through technical and policy assistance.
- Reducing methane emissions from pipelines and other fossil sources by an amount equal to as much as 100 million metric tons of carbon per year by 2005.
- Providing technical and policy support to encourage the development of natural gas grids.
- Reducing energy use in the industrial sector through the introduction of best practice methods, including advanced sensors and controls, and energy efficient motor drive systems.
- Conducting research in nuclear energy to address cost, waste, safety, and proliferation concerns.
- Providing technical and policy assistance in support of energy sector reform that creates open, competitive markets while protecting the public interest.

**Initiative Structure.** This initiative will strengthen efforts to streamline current bureaucratic procedures to better assist U.S. firms wishing to invest in clean energy projects in developing and transition countries. This initiative will also encourage public-private partnerships with foreign counterparts to demonstrate clean energy technologies, drive down their cost, and facilitate private sector financing for their large-scale deployment. The initiative will employ a range of proven policy tools, including U.S. technical and policy assistance to developing countries through personnel exchanges, conducting collaborative R&D with key foreign research groups, developing integrated renewable energy, energy efficiency, and advanced fossil energy technologies and pilot projects, and providing a range of trade supports to expand clean energy exports.

The initiative's requested \$100 million increase for these activities includes an additional \$46 million for the Department of Energy (DOE); \$30 million for the U.S. Agency for International Development; \$15 million for the Export-Import Bank; \$5 million for the Trade and Development Agency; and \$4 million for the Department of Commerce. A \$3 million increase in base programs is also requested at DOE, bringing the total increase to \$103 million.



# Bioenergy & Bioproducts Initiative

President Clinton's FY 2001 Budget includes \$289 million to accelerate the development and use of bio-based technologies, which convert crops, trees, and other "biomass" into fuels, power, chemicals, and other products. This initiative supports the President's August 1999 Executive Order 13134 and Memorandum on Promoting Biobased Products and Bioenergy, aimed at tripling U.S. use of biobased products and bioenergy by 2010. The initiative provides an increase of more than \$93 million (47 percent) over the amounts available for FY 2000, with \$49 million directed towards the Department of Energy (DOE) and \$44 million for stepped-up efforts at the Department of Agriculture (USDA). (Funding in DOE is also considered part of the Climate Change Technology Initiative.) In addition to this increase in R&D, the Commodity Credit Corporation will provide \$100 million in FY 2000 and up to \$150 million in FY 2001 and 2002 in incentive payments to encourage production of biobased fuels. The initiative will increase the viability of alternative energy sources and help meet environmental challenges like global warming, while diversifying and strengthening the rural economy.

***New Economic Opportunities for a New Century.*** Continuing advances in forest and farm technology, molecular biology, and other areas are fueling a revolution in the use of biomass to make low-polluting products, such as:

- **transportation fuels**, like cellulosic ethanol from agricultural waste;
- **electricity**, by burning wood chips and switchgrass along with coal in existing plants and by converting paper industry wastes into fuel gases for advanced gas turbines;
- **commercial products**, such as chemicals, glues, paints, packing materials, and textiles.

Already, creative companies such as **Cargill-Dow Polymers** are making this vision a reality, recently announcing plans to build a \$300 million production facility that will convert corn based sugars into plastic fibers that can be used to make products that are all natural and biodegradable.

Meeting the President's goal of tripling U.S. use of bioenergy and bioproducts will add billions in new income for farmers, producing 50,000 new, high-technology jobs in small processing plants in rural America and up to 130,000 such jobs in biopower, bioproducts, and biofuels industries.

***Cleaner Energy, Cleaner Environment.*** Bioenergy and bioproducts can dramatically reduce greenhouse gas emissions that contribute to global warming. Since crops absorb carbon during growth, their use for energy and other applications results in near zero net carbon release. Tripling our use of bioenergy and bioproducts by 2010 will reduce annual greenhouse gas emissions by up to 100 million tons – the equivalent of taking over 70 million cars off the road.

***Making Biomass Competitive With Fossil Fuels.*** A major goal of this initiative is to make

biomass a viable competitor to fossil fuels as an energy source and chemical feedstock while protecting the environment. This goal is achievable, but it will require an unprecedented effort to support research in universities, companies, and our national laboratories. In the past few years, for example, federal research has developed techniques that greatly accelerate the production of sugars and other useful chemicals from materials like corn stover and wood. The research funded under this initiative will ensure a continuing flow of the basic innovations on which such investments can be made.

Many uses for biomass materials are possible in the near future and this initiative will support research concepts on a competitive basis. This will include support for integrated systems capable of processing feedstocks simultaneously into a variety of products such as fuels, chemicals, and electricity. Much like today's petroleum-based refineries, the mix of products from these facilities will depend on market conditions. The research aims to understand the basic chemistry of cellulose and other materials in biomass, and develop new thermal, chemical, and bio-chemical techniques for converting these materials into useful forms.

***Initiative Structure.*** The President's August 1999 Executive Order instructs DOE, USDA, the National Science Foundation, the Environmental Protection Agency and other agencies, to work closely together in supporting the broad range of needed research and development efforts. These efforts will support research partnerships linking industry, university, and government research facilities selected on a competitive basis. Key areas of new research activity will include:

- Development of inexpensive systems to break down cellulose into low-cost sugars, allowing woody and grassy crops and agricultural waste, such as corn stalks, to take the place of high-value grain and food crops as biofuel feedstocks.
- Renewable bioproducts, using multi-disciplinary and university/industry partnerships to develop and accelerate adoption of possible "leap-frog" technologies for converting crops, trees and residues into chemical feedstocks and consumer products.
- Biopower, promoting both the integration of biomass gasification systems with modern gas-turbine/steam-turbine generation systems, and the co-firing of biomass with coal.
- Expanded Forest Service research on faster-growing trees and the use of small-diameter trees for commercial, biobased products.
- Methane gas recovery pilots to reduce greenhouse gas emissions from livestock operations and provide assistance to farmers that want to produce or market biobased products.
- Expanded Agricultural Research Service research to develop biobased materials from commodities and bioproducts, and convert biomass to energy.

- Competitive resources for research partnerships with universities, complementing the new Initiative for Future Agriculture and Food Systems announced by USDA earlier this month.
- Rural development grants to rural electric cooperatives to develop pilot projects to demonstrate the commercial viability of small-scale biomass fuel generation, grants for technical assistance for processing and marketing biobased products, and loans for facilities and operating capital for organizations engaged in biobased production activities.

# Clean Air Partnership Fund

To help protect public health and ease the threat of global warming, President Clinton is proposing \$85 million for the creation of a new Clean Air Partnership Fund. The Fund will provide grants to states, localities, and tribes to support efforts that achieve reductions in both greenhouse gas emissions and ground-level air pollutants. First proposed as part of last year's FY 2000 budget, the Fund will be administered by the Environmental Protection Agency under existing authority.

***Integrated Pollution Control.*** The Fund will stimulate integrated, cost-effective pollution control strategies. It directs new resources to state, local, and tribal governments to finance projects and programs that achieve accelerated reductions in both air pollutants, such as soot, smog, and air toxics, and in greenhouse gases.

***A Quicker Path to Cleaner Air.*** By providing new resources for projects that accelerate pollution reductions, the Fund will enable communities to achieve multi-pollutant clean air goals sooner and reduce greenhouse gas emissions at the same time.

***Technological Innovation.*** The Fund will help spur both public and private sector innovations in next-generation pollution control technology.

***A Magnet for Local Investment & Innovation.*** The Fund will encourage public-private partnerships to demonstrate ways to create a cleaner environment at the local level. The Fund can be used to support local revolving funds, low-interest loan programs, matching grants, and other mechanisms that will leverage the original Federal investment, greatly increasing its impact.

***"Win-Win" Clean Air Projects.*** The Fund will support a wide range of practical projects that will mean cleaner air, reduced greenhouse gas emissions, and real savings for taxpayers and consumers. These could include projects such as building combined heat and power facilities that put waste heat to work, reducing emissions of both sulfur dioxide and carbon dioxide; retrofitting municipal buildings to make them more energy efficient, reducing pollution resulting from electricity generation; and upgrading municipal vehicle fleets to make them more fuel efficient.

## Climate Change Technology Initiative: \$4.0 Billion in Tax Incentives

The President is proposing a new \$4.0 billion package in tax incentives over five years to help reduce greenhouse gas emissions by spurring the purchase of energy efficient products and the use of renewable energy (see Table 2). This year's CCTI tax package is \$400 million greater than last year's proposed five-year package.

**Table 2. CCTI Tax Incentives (\$ in Millions)**

|                            |                                                                                                                                                                                                                  | <b>Revenue Effect</b> |                          |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|--------------------------|
|                            |                                                                                                                                                                                                                  | <b>FY 2001</b>        | <b>Total<br/>FY01-05</b> |
| <b>Homes and Buildings</b> |                                                                                                                                                                                                                  |                       |                          |
|                            | Provide tax credit for energy efficient building equipment                                                                                                                                                       | -18                   | -201                     |
|                            | Provide tax credit for new energy efficient homes                                                                                                                                                                | - 82                  | -633                     |
|                            | Provide tax credit for solar energy systems                                                                                                                                                                      | -9                    | -132                     |
| <b>Vehicles</b>            |                                                                                                                                                                                                                  |                       |                          |
|                            | Extend tax credit for electric and fuel cell vehicles and provide tax credits for qualified hybrid vehicles                                                                                                      | 0                     | -2078                    |
| <b>Clean Energy</b>        |                                                                                                                                                                                                                  |                       |                          |
|                            | Extend tax credit for electricity produced from wind and closed-loop biomass; provide credits for open-loop biomass facilities and coal-biomass cofiring; and provide credits for methane from certain landfills | -91                   | -976                     |
| <b>Industry</b>            |                                                                                                                                                                                                                  |                       |                          |
|                            | Provide 15-year recovery period for distributed power property                                                                                                                                                   | -1                    | -10                      |
| <b>TOTAL*</b>              |                                                                                                                                                                                                                  | <b>-201</b>           | <b>-4030</b>             |

\*Totals may not add due to rounding.

### **HOMES AND BUILDINGS**

- ***Tax credit to consumers who purchase new energy efficient homes.*** To encourage the purchase of new energy efficient homes, consumers would receive a tax credit of \$1,000 for homes purchased from 2001-2003 that use at least 30 percent less energy than the standard under the 1998 International Energy Conservation Code (IECC) and a credit of \$2,000 for homes purchased from 2001-2005 that use at least 50 percent less energy than the IECC standard.

- ***Tax credit for energy efficient equipment in new and existing homes or buildings.*** This credit will encourage the purchase of electric heat pump water heaters, natural gas heat pumps, and fuel cells. The credit would apply to both residential and commercial equipment. The credit would be 20 percent of the cost of the investment, subject to a cap, for equipment purchased from 2001-2004.
- ***Tax credit for solar energy systems.*** A 15 percent tax credit will encourage the purchase by consumers and businesses of solar energy systems. The maximum credit would be \$2,000 for rooftop photovoltaic systems placed in service from 2001-2007 and \$1,000 for solar water heating systems placed in service from 2001-2005.

## VEHICLES

- ***Tax credits for electric, fuel cell, and qualified hybrid vehicles.*** Cars and light trucks (including minivans, sport utilities, and pickups) currently account for 20 percent of greenhouse gas emissions. Tax credits for electric, fuel cell, and hybrid vehicles will help to move advanced technologies from the laboratory to the highway. These technologies can significantly reduce emissions of carbon dioxide, the most prevalent greenhouse gas.
  - **Extend the current tax credit for electric vehicles and fuel cell vehicles.** Under current law, a 10 percent credit, up to \$4,000, is provided for the cost of qualified electric vehicles and fuel cell vehicles. The credit begins to phase down in 2002 and phases out in 2005. The President's proposal would extend the tax credit at its \$4,000 maximum level through 2006.
  - **Tax credits for hybrid vehicles.** The credit – available for all qualifying vehicles, including cars, minivans, sport utility vehicles, and pickup trucks – would range from \$500 to \$3,000 for qualified hybrid vehicles purchased from 2003-2006, depending upon the vehicle's design performance.

## CLEAN ENERGY

- ***Tax credit for electricity produced from wind.*** Current law encourages the production of electricity from wind, which emits no greenhouse gases, through a tax credit of 1.5 cents per kilowatt hour (adjusted for inflation after 1992). The current tax credit covers facilities placed in service before January 1, 2002. The President proposes a 2.5-year extension of this tax credit.
- ***Tax credits for electricity produced from biomass.*** Biomass refers to trees, crops and agricultural wastes used to produce power, fuels or chemicals. This package of credits would:

-- **Extend current “closed-loop” biomass credit.** This proposal extends for 2.5 years the current 1.5 cent per kilowatt hour tax credit (adjusted for inflation after 1992), which covers facilities placed in service before January 1, 2002.

-- **Provide credits for “open loop” biomass facilities.** This proposal expands the definition of biomass eligible for the 1.5 cent tax credit to include certain forest-related resources and agricultural and other sources for facilities placed in service from 2001-2005, and provides a 1.0 cent credit for electricity produced from 2001-2003 from facilities placed in service prior to January 1, 2001.

-- **Provide a credit for cofiring biomass and coal.** This proposal adds a 0.5 cent per kilowatt hour tax credit for electricity produced by cofiring biomass in coal plants from 2001-2005.

-- **Provide credit for methane from landfills.** This proposal adds a 1.5 cent per kilowatt hour credit for electricity produced from landfills not subject to EPA’s 1996 New Source Performance Standards/Emissions Guidelines (NSPS/EG) and 1.0 cent per kilowatt hour for landfills subject to NSPS/EG. Qualified facilities would be facilities placed in service after December 31, 2000 and before January 1, 2006.

## **INDUSTRY**

- ***15-year recovery period for distributed power property.*** The development of distributed power technologies has made it possible to generate electricity locally at dispersed industrial, commercial, and residential locations. Such technologies can be more energy efficient and generate fewer greenhouse gases than conventional generation methods. This proposal would simplify and rationalize the current depreciation system by assigning a single 15-year recovery period to distributed power property.

## Climate Change Technology Initiative: \$1.4 Billion for Efficient Energy and Clean Energy

The President's FY 2001 budget proposes over \$1.4 billion for the research, development, and deployment of renewable energy technologies, energy efficient products and buildings that will help reduce U.S. greenhouse gas emissions. This represents a \$337 million increase (30 percent) over FY 2000 spending (see Table 3). The President's proposed investment package covers the four major carbon-emitting sectors of the economy -- buildings, transportation, industry, and electricity -- as well as carbon sequestration (see Table 4). The following sections highlight selected programs in each of these areas of effort. The full agency programs extend well beyond what is described here.

**Table 3. CCTI Funding by Agency (\$ in Millions)**

|                             | <b>FY 1999<br/>Enacted</b> | <b>FY 2000<br/>Enacted</b> | <b>FY 2001<br/>Request</b> | <b>Change<br/>from 2000</b> |
|-----------------------------|----------------------------|----------------------------|----------------------------|-----------------------------|
| Energy                      | 902                        | 980                        | 1,169                      | +189                        |
| EPA                         | 109                        | 103                        | 227                        | +124                        |
| Housing & Urban Development | 10                         | 10                         | 12                         | +2                          |
| Agriculture                 | 0                          | 0                          | 24                         | +24                         |
| Commerce                    | 0                          | 2                          | 0                          | -2                          |
| <b>TOTAL*</b>               | <b>1,021</b>               | <b>1,095</b>               | <b>1,432</b>               | <b>+337</b>                 |

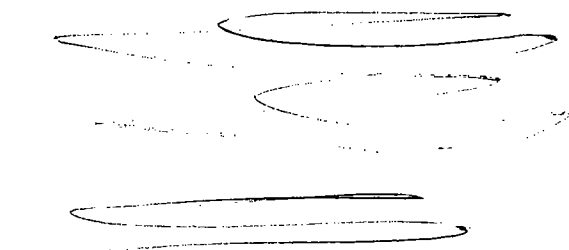
\*Totals may not add due to rounding.

**Table 4. CCTI Funding by Area of Activity (\$ in Millions)**

|                                 | <b>FY 1999<br/>Enacted</b> | <b>FY 2000<br/>Enacted</b> | <b>FY 2001<br/>Request</b> | <b>Change<br/>from 2000</b> |
|---------------------------------|----------------------------|----------------------------|----------------------------|-----------------------------|
| Buildings                       | 176                        | 194                        | 275                        | +81                         |
| Transportation                  | 285                        | 309                        | 382                        | +73                         |
| Industry                        | 187                        | 189                        | 251                        | +62                         |
| Electricity                     | 310                        | 321                        | 406                        | +85                         |
| Carbon Sequestration            | 14                         | 30                         | 52                         | +22                         |
| Management, Planning & Analysis | 48                         | 51                         | 65                         | +14                         |
| <b>TOTAL*</b>                   | <b>1,021</b>               | <b>1,095</b>               | <b>1,432</b>               | <b>+337</b>                 |

\* Totals may not add due to rounding.





## THE WHITE HOUSE

WASHINGTON

### BUILDINGS

- ***Partnership for Advancing Technology in Housing.*** PATH is a partnership between the Federal government and building industry to develop and deploy housing technologies to make new homes 50 percent more energy efficient and to make at least 15 million existing homes 30 percent more energy efficient within a decade. PATH has established five pilot communities in Denver, Los Angeles, Pittsburgh, and Tuscon. The program coordinates work in the Department of Housing and Urban Development, the Department of Energy (DOE), the Environmental Protection Agency (EPA), FEMA, the Department of Commerce and other agencies, ensuring, for example, that research conducted in DOE's enhanced residential buildings program is quickly transferred into practice. The FY 2001 budget request for building efficiency efforts, such as PATH, Energy Star, and Building America, totals \$275 million, a 42 percent increase over FY 2000 appropriations.
- ***Energy Efficient Appliances and Products.*** Various DOE and EPA programs aim to promote the dissemination of energy efficient appliances and products:
  - DOE will accelerate its program to establish **energy efficiency standards** for commercial heating and cooling, water heaters, and electrical distribution transformers, and will begin efforts to harmonize international energy-efficiency standards and test methods to promote exports of efficient U.S. products.
  - EPA and DOE's **Energy Star Products** program saves consumers money and reduces greenhouse gas emissions at the same time by promoting the use of energy efficient products – everything from computers to refrigerators to central air-conditioning units. New funding will support the launch of new Energy Star product lines and will promote the Energy Star labeling program in 6-10 export markets.
- ***Energy Efficient Commercial Buildings.*** DOE and EPA work in partnership with industry to research, develop, and deploy new technologies and practices to improve the energy performance of commercial buildings. Participants include the Empire State Building, the World Trade Center, and Chicago's Sears Tower. Buildings in the top 25 percent in energy efficiency qualify for EPA's "**Energy Star Buildings**" label.
- ***Energy Smart Schools/Energy Star Label for Schools.*** DOE and EPA have two programs that are working in coordination to improve energy efficiency in U.S. primary

and secondary schools, bringing together public and private sector resources to cut schools' energy bills so that the savings can be reinvested in students and their education.

## TRANSPORTATION

- ***Partnership for a New Generation of Vehicles.*** PNGV is a government-industry effort that aims to develop attractive, affordable cars that meet all applicable safety and environmental standards and get up to three times the fuel efficiency of today's cars. Since 1993, great strides have been made in producing lower-cost, light-weight materials, inexpensive fuel cells, and advanced internal combustion engines for use in hybrid vehicles. The program aims to produce a prototype mid-sized family car capable of 80 miles per gallon with a two-thirds reduction in carbon emissions by 2004. In January 2000, the auto-industry partners unveiled their PNGV "concept cars" at the Detroit Auto Show, which keeps the program on schedule for meeting its 2004 goal. The FY 2001 budget includes \$255 million for PNGV-related work, an increase of \$30 million over the amount appropriated for FY 2000.
- ***Light and Heavy Trucks.*** Similar government-industry efforts are aimed at developing cleaner, more efficient diesel engines for both light and heavy trucks.
  - By 2003, DOE aims to develop **advanced diesel cycle engine technologies** for pickup trucks, vans, and sport utility vehicles which achieve at least a 35 percent fuel efficiency improvement relative to current gasoline-fueled trucks while meeting strict emission standards.
  - By 2004, DOE, in coordination with EPA and the Department of Defense, aims to develop **engine and vehicle technologies for heavy trucks** that will increase the fuel economy to 10 mpg from the current average of 7 mpg.

## INDUSTRY

- ***Industries of the Future.*** This DOE program works cooperatively with the nation's most energy-intensive industries – such as aluminum, glass, chemicals, forest products, mining, petroleum refining, and steel – developing technologies that increase energy and resource efficiency. Promising collaborative efforts include improvements in the process of making steel, pulp and paper, and other energy-intensive products that could dramatically increase efficiency, lower greenhouse gas emissions, and improve competitiveness.
- ***Industrial Combined Heat and Power (CHP) Systems.*** DOE is developing new industrial CHP systems to capture thermal heat would otherwise be wasted. These systems are expected to be 15 percent more energy efficient and 80 percent cleaner than conventional power systems and cut electricity costs by 10 percent. In addition, EPA and DOE are also working to eliminate barriers to the rapid dissemination of combined heat

and power technology.

- ***Voluntary Industrial Partnerships.*** EPA will expand its industry partnership programs, such as **Climate Wise** and the **Voluntary Aluminum Industrial Partnership**, to encourage businesses to take advantage of cost-effective emissions reductions opportunities -- including emissions of the most potent greenhouse gases, such as methane, perfluorocarbons (PFCs), hydrofluorocarbons (HFCs), and sulfur hexafluoride (SF6).
- ***Agriculture and Forestry.*** The Department of Agriculture (USDA) will undertake R&D and support demonstration projects aimed at both lowering greenhouse gas emissions from agriculture and forestry and reducing their vulnerability to climate change.

--The **Natural Resources Conservation Service** will invest \$3 million in projects to demonstrate and test various means of reducing greenhouse gas emissions in agriculture, such as compost-based waste-handling facilities, rotational grazing systems, and improved feed and forage systems.

--The **Agricultural Research Service** will devote \$8.5 million towards climate change related activities, including the development of new technology and expertise for reducing agriculture's vulnerability to a changing climate. Field experiments will seek to measure various potential effects of climate change, such as varying amounts and patterns of rainfall on forage production.

The FY 2001 budget also includes important USDA funding for developing advanced biomass energy technologies; R&D and demonstration projects for carbon sequestration; research to study the role of farms, forests, and other natural or managed lands in capturing and storing carbon; and a comprehensive U.S. soil carbon inventory (see p.16 below).

## ELECTRICITY

- ***Photovoltaic (PV) Energy Systems.*** Over the past 20 years, Federal R&D has resulted in a 90 percent cost reduction in solar photovoltaics. DOE will accelerate R&D of the next-generation photovoltaic cells; increase manufacturing R&D; increase research in buildings-integrated applications; and fund efforts to develop new, unconventional technologies.
  - **Million Solar Roofs.** In June, 1997, the President announced an initiative to encourage the installation of one million solar systems by 2010, which would reduce carbon emissions equivalent to the annual emissions from 850,000 cars. To

date, DOE has received commitments for over 900,000 solar rooftop installations. In FY 2001, DOE expects 40,000 systems to be installed under this program, bringing the total to 90,000.

-- **Technology Advances.** By 2004, DOE aims to increase the efficiency of thin-film PV modules in multi-megawatt production from 7 percent to 12 percent and to reduce module manufacturing costs by 40 percent (from \$2.50/watt to \$1.50/watt). Specific performance measures for FY 2001 include achieving 14 percent stable efficiency in prototype thin-film modules and, in a new initiative begun in FY 2000, identifying at least three promising non-conventional PV technologies for further development.

- **Biomass Power.** DOE supports biopower systems R&D addressing three major technology areas: co-firing biomass with fossil fuels such as coal and natural gas, small modular biopower systems, and advanced biomass gasification. This work is also included in the Bioenergy and Bioproducts Initiative described in above (see pp.4-5 above).
- **Wind Powering America.** This initiative, announced in June 1999, will accelerate DOE's research, development, testing and field validation of next-generation wind technologies, with a goal of supplying 5 percent of U.S. electricity through wind technologies by 2020. This will be supported by an aggressive R&D program that will reduce the cost of electricity in favorable wind sites to 2.5 cents per kilowatt hour by 2002, and will move specialized cold-weather wind turbines from development to demonstration in 2000, leading to commercialization in 2001.
- **Hydrogen.** DOE will accelerate research on low-cost hydrogen production and storage, prerequisites to the widespread use of hydrogen as a fuel.
- **High Temperature Superconductivity.** DOE supports industry-led projects to capitalize on recent breakthroughs in superconducting wire technology, aimed at developing devices such as advanced motors, power cables, and transformers. These technologies would allow more electricity to reach the consumer without an increase in fossil fuel input.

## CARBON SEQUESTRATION

- **R&D for Sequestration.** Research initiatives are being funded to find ways to sequester (store) carbon. Examples include:

-- **Enhancing Forest and Farmland Sinks.** The **Forest Service**, in conjunction

with other USDA agencies, will spend \$3 million for R&D and demonstration projects for optimizing forest, farmland, and rangeland carbon sinks. The focus of such projects will include storage of carbon in forest soils and increased durability and use of wood products to sequester carbon.

**-- Enhancing natural geological and oceanic processes.** DOE will support research into the feasibility of capturing and storing carbon dioxide in underground geological structures and in the deep ocean.

## Other Climate-Related Investments

There are a number of additional programs for which funding is proposed in the FY 2000 budget that – while not part of the Climate Change Technology Initiative (CCTI) per se – contribute to improving energy efficiency and reducing greenhouse gas emissions. These programs include:

- ***Cleaner Coal and Natural Gas.*** The FY 2000 budget includes a total of \$232 million (of which \$56 million is part of CCTI) to support the Department of Energy's (DOE) aggressive R&D effort to develop next-generation technologies for the combustion and use of coal and natural gas. For example, research and development of integrated gasification combined cycle technology could lead to ultra-high efficiency coal plants with significantly lower greenhouse gas emissions.
- ***Low Income Weatherization and State Energy Grants.*** These DOE programs facilitate energy efficiency investments at the State and local level. The **Weatherization Assistance Program**, for example, delivers energy conservation services, such as insulation, to low-income Americans, reducing energy costs for consumers, improving health and safety, and reducing carbon emissions. The total FY 2001 budget request for these two programs is \$191 million – a \$22 million increase over FY 2000 appropriations.
- ***Agricultural & Forestry Conservation Programs.*** The Administration's 2001 Farm Safety Net Initiative proposes an increase of \$1.3 billion in FY 2001 funding for Department of Agriculture conservation programs. Many of these same programs have the co-benefit of reducing carbon emissions resulting from agriculture and forestry and enhancing the ability of "sinks," such as forests and farmlands, to sequester or store carbon. This includes programs such as the **Conservation Reserve Program**, the **Environmental Quality Incentives Program**, and the **Farmland Protection Program**. In general, these programs assist farmers, ranchers, and other landowners in conserving and improving soil, water, and other natural resources associated with rural land.



# U.S. Global Change Research Program

The United States Global Change Research Program (USGCRP) seeks to provide a sound scientific understanding of both the human and natural forces that influence the Earth's climate system. USGCRP science results provide useful information for environmental decision-making on issues such as climate change, ozone depletion, changes in ecosystems, and land use. This multi-agency effort is coordinated through the National Science and Technology Council.

For FY 2001, the President is requesting \$1.74 billion for the USGCRP, an increase of \$39 million above the amount enacted for FY 2000. \$843 million is for scientific research and improvements to surface-based monitoring, (an increase of \$79 million, or about 10 percent). \$923 million is for NASA's development of Earth observing satellites to monitor climate change and other global changes (a decrease of \$34 million, reflecting the phasing of funding for large development projects). Important USGCRP budget highlights include:

- ***Improved Climate Observations.*** The FY 2001 budget provides \$26 million to enhance NOAA surface-based observations, including creation of a climate reference network to provide, for the first time, automated, simultaneous, and ideally located measurements of changing temperatures, precipitation, and soil moisture. Measurements of atmospheric trace gases, aerosols, ocean temperatures, and ocean currents will also be expanded.
- ***The Global Water Cycle.*** The FY 2001 budget provides \$308 million (an increase of \$35 million, or about 13 percent) for research on changes in the Earth's water cycle, which is one of the primary determinants of the Earth's climate. The water cycle is emerging as a top research priority because changes appear to be occurring already. The launch of NASA's EOS Aqua spacecraft in December 2000 will support this research by providing new global measurements of humidity, cloud properties, precipitation, snow, and sea ice.
- ***Ecosystem Changes.*** The FY 2001 budget provides \$224 million for research on the potential impacts of climate change and other stresses on forests, coastal areas, croplands, and other ecosystems (an increase of \$19 million, or 9 percent). New studies will improve our understanding of the relationships among land cover, land use, climate, and weather, and help identify "thresholds" for significant changes in ecosystems.
- ***Carbon Cycle Initiative.*** The FY 2001 budget request continues strong support for the multi-agency carbon cycle science initiative begun in FY 2000, providing \$227 million (an increase of \$23 million or 11 percent). This request includes funds to study how carbon cycles between the atmosphere, the oceans, and land, and the role of farms, forests, and other natural or managed lands in capturing carbon. Such carbon "sinks" may help the United States and other nations offset greenhouse gas emissions. Key agencies include the Departments of Agriculture (USDA), Energy, Interior, NASA, the National Science Foundation, and the Smithsonian Institution. Included in the request is \$13.5 million (an increase of over \$12

million) to significantly expand USDA Natural Resources Conservation Service soil carbon inventory and analysis efforts.

## Energy Efficient Air Conditioning Tax Incentive Proposal

Only 20% of central air conditioners and heat pumps sold today in the United States exceed the minimum federal regulatory standard for energy efficiency (10 SEER – Seasonal Energy Efficiency Rating). A tax credit for purchasers of central air conditioners and heat pumps that exceed minimum standards would encourage consumers to purchase these products, save energy and enable utilities to reduce carbon dioxide emissions. Carbon dioxide has been identified as a green house gas contributing to global warming.

The President's FY2000 budget proposal includes tax credits for purchases of high efficiency central air conditioners and heat pumps as follows:

13.5 SEER and above: 10% tax credit (\$250 maximum)

15.0 SEER and above: 20% tax credit (\$500 maximum)

(for heat pumps, the heating mode rating must be 9.0 HSPF – Heating Seasonal Performance Factor)

To make a greater market impact, a more effective tax incentive mechanism should be based on a sliding scale as follows:

13.0 SEER  
(8.0 HSPF for heat pumps) 10% tax credit

14.0 SEER  
(8.2 HSPF for heat pumps) 15% tax credit

15.0 SEER  
(8.5 HSPF for heat pumps) 20% tax credit

A 10% tax credit for 13.0 SEER central air conditioners would shift 5% of the market from 10 SEER units over five years, resulting in a 2 MMT reduction of carbon dioxide emissions. Emission reductions would also be achieved at the 14.0 and 15.0 SEER levels, but not in proportion at the 13.0 SEER level where more products are sold.

**Encourage energy efficient technologies. Save energy. Reduce carbon dioxide emissions.**

December 3, 1998

Mr. Todd Stern  
Assistant to the President  
For Special Projects  
Ground Floor, West Wing  
Executive Office of the President  
1600 Pennsylvania Ave., N.W.  
Washington, DC 20500

Dear Mr. Stern:

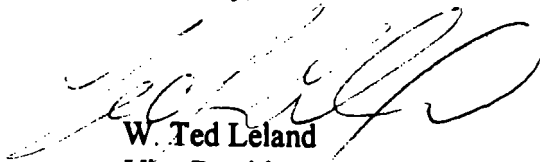
The Air-Conditioning and Refrigeration Institute (ARI) has learned that the administration is in the process of putting its budget proposal together for FY2000. Attached is a courtesy copy of the proposals ARI offered to the U.S. Treasury for the president's proposed Climate Change Technology Initiative for FY2000.

As you may recall, air-conditioners and heat pumps were included in last year's CCTI. We hope that the administration would be amenable to a more flexible approach than last year where incentives and credits were proposed for some ARI-covered products. Our proposal would seek support for adopting a "sliding scale" approach, whereby purchasers could receive a tax credit, albeit at a reduced percentage, for purchase of a premium energy efficient air-conditioner or heat pump. Our data suggests that expanding the family of product available for a tax credit will not result in a significant loss of revenue for the Treasury.

We have also proposed the inclusion of centrifugal chillers into the administration's budget proposal. We believe that an incentive to replace CFC-based chillers, with higher-efficient, non-CFC containing chillers, would do much to meet the nation's global warming and ozone reduction goals.

We would be happy to follow up with you or answer any questions you might have with regard to these proposals.

Sincerely,



W. Ted Leland  
Vice President, Government Affairs

attachments



November 24, 1998

Dr. Geraldine Gerardi, Ph. D.  
Director, Business Taxation Division  
Office of Tax Analysis  
U.S. Department of the Treasury  
Washington, D.C. 20220

Dear Dr. Gerardi:

The Air-Conditioning and Refrigeration Institute understands that the Clinton Administration is working on its Fiscal Year 2000 budget proposal. Part of that proposal will include efforts to address climate change through providing tax incentives for energy efficient technologies.

ARI supports the inclusion of tax credits/incentives for air-conditioners and heat pumps and increased spending in research and development of energy efficient technologies. As we discussed last year, ARI believes that the use of a "sliding scale" approach would produce more energy savings than that proposed in last year's proposal which calls for a 20% tax credit only for purchases of air conditioners that meet a 15 SEER (Seasonal Energy Efficiency Ratio). As an example of how a sliding scale approach could work, purchasers would be entitled to a 10% tax credit for purchase of a 13 SEER air conditioner. Our data suggests that lowering the threshold for a tax incentive to a "13 or greater" captures only 2.9% of the market, which is only slightly higher than the 2% threshold adopted by the administration in last year's CCTI proposal.

ARI's estimates, using extremely generous assumptions, that the maximum revenue losses from inclusion of ARI covered products into a tax initiative would amount to \$ 705 million, over a five-year period. These aggressive estimates include matching this current year's sales, which were a record year for the industry. Additionally, our estimates of the number of CFC-containing chillers that might be replaced in the coming year, is fairly high. (For an estimated breakout of impacts of tax incentives on ARI covered products, please see attached analysis.)

ARI believes that the new proposal should be expanded to include tax incentives for chillers. Providing incentives for the replacement of CFC-based chillers would contribute significantly to the reduction of greenhouse gases and to improve energy efficiency. In fact, EPA calculates that when 44 percent of the CFC-based chillers are replaced and converted, which ARI estimates will occur in the year 2000, chiller owners will reduce energy use by 7 billion kilowatt hours per year, saving \$480 million annually. The electricity saved would be enough to provide for the average annual electrical needs of approximately 740,000 American households.

Dr. Geraldine Geraldi

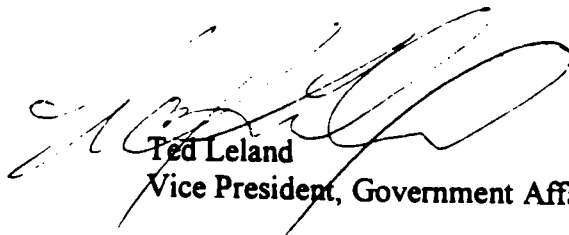
Page 2

11/24/98

ARI encourages the administration to refrain from referring to the program as a "Climate Change" initiative for the primary reason that many might consider the initiative as "back-door" implementation of the Kyoto protocol. While ARI does not have a specific wording change, it recommends the use of "energy efficiency" in the announcement of the initiative.

Feel free to contact us regarding how ARI's products might fit into the tax incentive program.

Sincerely,

A handwritten signature in black ink, appearing to read "Ted Leland", is written over the typed name and title.

Ted Leland

Vice President, Government Affairs

attachments

## ARI TAX INCENTIVE PROPOSALS FOR CCTI

| <u>PRODUCT</u>              | <u>10% TAX CREDIT</u>           | <u>20% TAX CREDIT</u>           |
|-----------------------------|---------------------------------|---------------------------------|
| 1. Unitary Small Equipment  | 13.0 SEER                       | 15.0 SEER                       |
| 2. Ground Source Heat Pumps | 13.0 EER                        | 15.0 EER                        |
| 3. Centrifugal Chillers     |                                 |                                 |
| A. 150 – 300 Tons           | 6.4 COP & IPLV<br>(0.55 KW/Ton) | 6.7 COP & IPLV<br>(0.52 KW/Ton) |
| B. >300 Tons                | 7.0 COP & IPLV<br>(0.50 KW/Ton) | 7.3 COP & IPLV<br>(0.48 KW/Ton) |

SEER – Seasonal Energy Efficiency Rating

EER – Energy Efficiency Rating

COP – Coefficient of Performance

IPLV – Integrated Part Load Value

**Estimates of Tax Revenue Losses**  
**Air-Conditioning and Refrigeration Institute**

**Central Air Conditioners**

6,200,000 = number of air-conditioners sold in 1998  
 2.90% = percentage of air-conditioners available at or above 13 SEER  
 \$500 = maximum amount of tax credit allowed per 1999 CCTI  
 or Rep. Matsui's implementation bill (H.R. 4538)  
 (\$375 used as an example of tax cut for a 14 SEER; \$250 used  
 for a 13 SEER)

*In this example, ARI assumes that the tax incentive will entice purchasers  
 to procuring higher efficient ARI products and technologies.*

|                        | Current<br>Breakout | Sales<br>Based on '98<br>Shipments | Tax<br>Credit | Revenue<br>Loss |
|------------------------|---------------------|------------------------------------|---------------|-----------------|
| Between 13 and 14 SEER | 2.00%               | 124,000                            | \$ 250        | \$ 31,000,000   |
| Between 14 and 15 SEER | 0.80%               | 49,600                             | \$ 375        | \$ 18,600,000   |
| Greater than 15 SEER   | 0.10%               | 6,200                              | \$ 500        | \$ 3,100,000    |
|                        |                     | 179,800                            |               | \$ 52,700,000   |

| Estimated Revenue Losses<br>broken out by SEER Rating.                                |                                 |                                                              |                            |                              |
|---------------------------------------------------------------------------------------|---------------------------------|--------------------------------------------------------------|----------------------------|------------------------------|
| With Tax Incentive                                                                    |                                 |                                                              |                            |                              |
| * A tax incentive would, at most,<br>double sales into respective<br>SEER categories. | * Estimated<br>Breakout<br>w/TI | Estimated<br>Sales Based<br>on '98 Sales<br>w/ Tax Incentive | Estimated<br>Tax<br>Credit | Estimated<br>Revenue<br>Loss |
| Between 13 and 14 SEER                                                                | 4.00%                           | 248,000                                                      | \$ 250                     | \$ 62,000,000                |
| Between 14 and 15 SEER                                                                | 1.60%                           | 99,200                                                       | \$ 375                     | \$ 37,200,000                |
| Greater than 15 SEER                                                                  | 0.20%                           | 12,400                                                       | \$ 500                     | \$ 6,200,000                 |
|                                                                                       |                                 | 359,600                                                      |                            | \$ 105,400,000               |



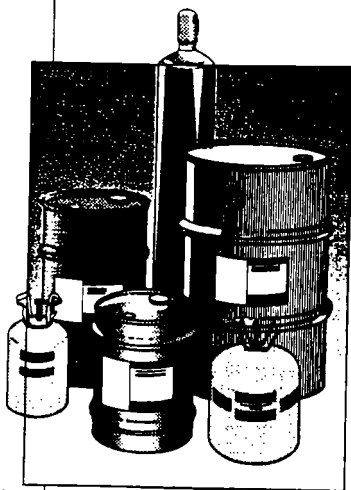
## Centrifugal Chillers

(not included in President's FY 1999 CCTI; ARI recommends that chillers be included in upcoming FY 2000 version of the CCTI)

- \$100,000 = approximate price of a centrifugal chiller**
- 50,000 = number of chillers containing CFC's that need to be replaced**  
**(presently, 20,000 chillers stand to be replaced over the next five years**  
**our data shows that 4,000 CFC-containing chillers are replaced each year.**  
**A tax incentive might encourage purchases of 160 premium efficient,**  
**non-CFC containing chillers per year; 4% of 4000)**
- 160 = number of chillers that would qualify for the tax incentive**
- 800 = over a five year period, number of chillers that would qualify for the incentive**
- 20% = tax credit proposed in Rep. Matsui's implementation bill**  
**for Energy Efficient Building Property**
- \$20,000 = maximum tax credit per chiller**
- 800 \* \$20000**
- \$16,000,000 = maximum revenue loss from tax break for replacement of chillers containing CFC's**

## Summation of Estimated losses in tax revenue from ARI covered products

|           |                     |                                                                                                       |
|-----------|---------------------|-------------------------------------------------------------------------------------------------------|
|           | <b>\$16,000,000</b> | <b>= maximum revenue loss from tax break for replacement of chillers containing CFC's</b>             |
| <b>\$</b> | <b>105,400,000</b>  | <b>= maximum revenue loss from tax break for air conditioners at a 13 SEER</b>                        |
| <b>\$</b> | <b>121,400,000</b>  | <b>= Estimated maximum losses in tax revenue for ARI covered products <u>over a 5 year period</u></b> |



# CAN TAX INCENTIVES SPEED CHILLER CHANGEOUTS?

by Edward W. Dooley

*It may take more than just the prospect of facing future refrigerant shortages to get owners of CFC-based equipment to either retrofit or replace it.*

**G**overnment officials should heed the potential for enormous reductions in global warming emissions by enacting a simple tax code change. Such a change would end the penalizing of building owners who for too long have borne a disproportionate share of the burden caused by the accelerated phaseout of chlorofluorocarbons (CFCs).

No one knows better than building owners how disruptive the government's tax policies have been. First, in a bid to slow the release of ozone-depleting CFCs, the federal government accelerated the ban on CFC production from the year 2000 to the end of 1995. Second, no one in government seemed to understand that large-tonnage, liquid chillers that use CFC refrigerants were designed to last for decades, and tax policies needed changing to accommodate that reality.

As a result, and quite understandably, the conversion and replacement of chillers used for comfort cooling in commercial, government, institutional, and

industrial buildings fell far behind expectations. By January 1, 1999, only 36% of the 80,000 CFC chillers will have been phased out. It appears certain that a majority of those chillers will still be in service at the start of 2001 — a full five years after the ban on CFC production.

One consequence of the slower-than-expected pace is that nearly 12,000 more CFC chillers were in service at the start of

1998 than was estimated in 1995. Each requires CFCs to remain in service.

## Energy Saving Potential

Another impact is the delay in energy savings that result from the installation of non-CFC chillers that are up to 40% more efficient than CFC units installed 20 years ago.

To put those savings in perspective, consider that the U.S. Environmental Protection Agency estimates that in 2000, when 44% of the chillers are replaced or converted, building owners with non-CFC units will:

- Begin saving 7 billion KWH annually
- enough to meet the electrical needs of 740,000 American homes for a year.
- Reduce their operating costs by \$480 million in energy savings.
- Avert emissions of 4 million tons of carbon dioxide and 34,000 tons of sulfur dioxide.

— Avoid the need for one and one-half large coal burning plants.

The benefits of these energy savings are magnified by the ongoing quest of industrialized nations — and developing countries — to find ways to reduce emissions of carbon dioxide. Scientists cite emissions from fossil fuel energy plants as a major source of carbon dioxide and negotiators working on the Kyoto Protocol are seeking ways to ensure reductions of global warming gases.

As our country struggles to devise voluntary methods to encourage the use of energy efficient equipment, it seems a shame that efforts

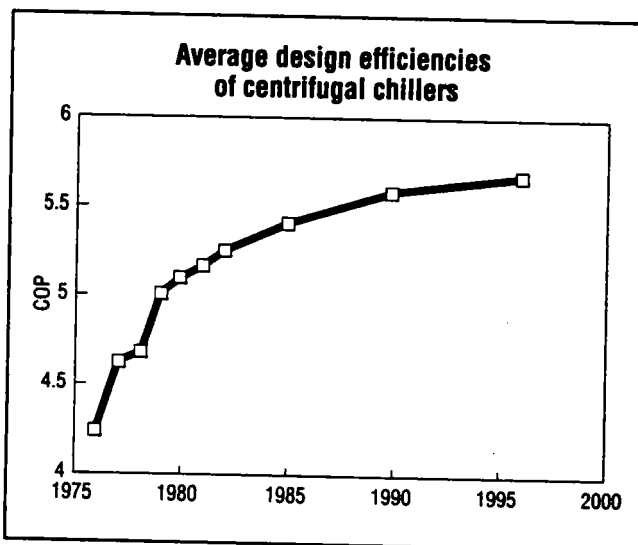
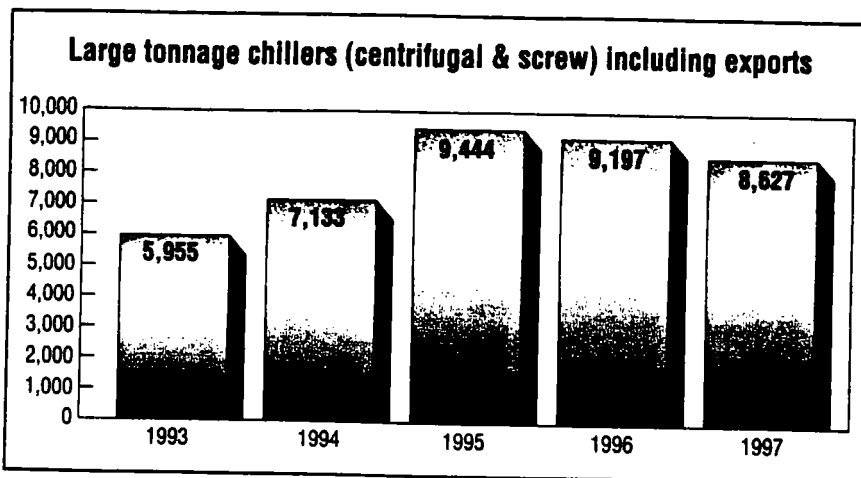


Figure 1 shows 25 years of chiller efficiency increases.



**Figure 2.** This graph shows how the sales of replacement chillers rose from 1993 to 1995, then began an unexpected downward trend expected to continue through the turn of the century.

aren't made to pick up early benefits through adoption of chiller phaseout tax incentives, especially at a time of federal tax surpluses.

While the effect of these savings is cumulative, and we're enjoying some of the benefits now, America could enjoy more of these savings sooner with a faster phaseout.

So what steps could be taken to spur CFC chiller replacement? One positive action would be for the U.S. government and other countries to consider the effect tax policy incentives can have in encouraging accelerated CFC chiller retirement.

Chillers tend to have high capital costs and long terms of service. The equipment is depreciated for tax purposes over decades. Thus, owners in the U.S. who replace CFC chillers might be allowed to take all remaining depreciation over a three, four or five year period, and/or owners might receive a tax credit for the purchase of new, non-CFC chillers. Similarly, the government could consider tax incentives to encourage home owners to step up to higher efficiency central air conditioners, especially since more than half of all shipments are for replacement units.

### Careful Planning Needed

While these ideas aren't the only concepts that could be considered, they represent an opportunity for further exploration in future years. The result could be significant savings of energy and substantial reduction in the generation of carbon dioxide and sulfur dioxide.

Meanwhile, it will pay CFC chillers owners to plan carefully for the future. The large number of those machines still in service will require many mil-

lions of pounds of CFC-11 and CFC-12 in coming years.

Instead of 45,700 CFC chillers in service in 1999, it now appears there will be roughly 52,000 of them. While CFC chiller phaseout has lagged expectations, it's not because of a lack of alternatives.

With their entire business at risk, centrifugal chiller manufacturers took the anticipated CFC production ban very seriously. Manufacturers in the United States and around the world worked diligently on designing chillers to use alternative refrigerants. The Environmental Protection Agency authorized use of the alternative refrigerants HCFC-123 AND HFC-134A AND HFC-410A. Already available technology permitted the use of HCFC-22, ammonia, and absorption chillers.

In the commercial air conditioning sector, centrifugal chillers account for 70% of the global installed cooling capacity. However, purchase of the units is affected by many factors. The driving force is total cost, which is calculated as first cost plus lifetime operating cost (See Fig. 1).

That's why chiller efficiency increases over the past 20 years are a real benefit to equipment owners. Increased

efficiency can result in early payback. The new chillers are also virtually leak free, reducing loss of refrigerant from chillers to a tiny fraction of what it once was annually.

Efficiency gains of 30 to 40% in the new non-CFC units versus those installed 20 years ago, coupled with the fact that new chillers are very tight, has provided a powerful argument for phase out of old CFC chillers.

That's one reason why U.S. produced chiller shipments for use in North America and abroad increased substantially to a record 9,444 units in 1995. Since that year, the trend has been toward fewer shipments, but the annual total remains historically high (See Fig. 2).

For example, combined U.S. and exported shipments of non-CFC centrifugal and screw chillers dropped by 247 units in 1996 and 570 chillers in 1997. It appears that the drop in shipments this year will exceed the drop in 1997. Looking back, however, even shipment of 8,000 units would be more than double the 3,744 units shipped in 1987 or the 3,726 shipped in 1986.

Consider how those shipments affect the CFC phaseout in the U.S. In 1997, there were 815 CFC units converted to non-CFC refrigerants and 3,913 replacements using centrifugal, screw, reciprocating, and absorption chillers, according to an Air Conditioning and Refrigeration Institute (ARI) survey.

This compares to 1,311 conversions and 3,045 replacements in 1996 (See Table 1). It's now clear from these statistics that equipment owners are opting for replacements over retrofitting, especially given the energy savings achieved with new chillers.

Numbers in ARI's latest survey, published in April, predicted even fewer conversions in 1999 and the year 2000. The numbers also revealed that with 11,683 more CFC chillers on January 1, 1998 than a 1995 survey predicted, chillers owners will need tens of millions of pounds of CFCs, principally CFC-11, and CFC-12, to keep those units in service over the coming years.

**TABLE 1**

|                  | Conversion | Replacements | Total  | % of 80,000 |
|------------------|------------|--------------|--------|-------------|
| Prior to 1/1/98  | 5,628      | 18,081       | 23,709 | 30          |
| 1/98 to 1/1/99   | 820        | 4,009        | 28,538 | 36          |
| 1/99 to 1/1/2000 | 800        | 4,194        | 33,352 | 42          |
| 1/2000 to 1/1/01 | 735        | 4,544        | 38,811 | 48          |

**Table 1 lists the number of chiller conversions that have occurred to date and those expected to occur before 2001.**

## REFRIGERANT

### **Availability**

What do these numbers mean in terms of refrigerant availability? It appears we've entered a period of delicate balance. Owners of CFC-12 units find themselves competing with the needs of automobile drivers for the refrigerant. While prices of CFC-11 and CFC-12, have escalated dramatically, they now appear stable.

CFC-11 equipment constituted approximately 82% of the original 80,000 CFC chillers, so demand for CFC-11 is expected to increase, because of the large number of still-in-service chillers using it.

It appears that supplies of virgin CFC-

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***"One consequence of the slower-than-expected pace is that nearly 12,000 more CFC chillers were in service at the start of 1998 than was estimated in 1995."***

11 have been drawn down substantially and future supplies will depend increasingly on reclaimed refrigerant. With fewer units than expected coming out of service, not much is being returned for reclaiming. The best guess is that most owners of CFC-11 are hanging on to their supplies to service their own units. As long as this supply lasts, the delicate balance continues.

However, the expectation in the industry is for the demand for CFC-11 to have a strong upward potential.

Supply and cost considerations — plus the potential for an early payback resulting from a chiller replacement — need to be given careful scrutiny and weighed as part of an analysis that determines a refrigerant management plan. There's a strong likelihood the majority of CFC chillers will still be in service at the start of the year 2001 — a full five years after the CFC production ban. It's also likely that tax incentives to building owners would speed up chiller phaseout. 

**Ed Dooley** is vice president of communications at the Air Conditioning and Refrigeration Institute. He has written and spoken extensively on the CFC phaseout and chiller owners response to it. Dooley can be reached by calling 703/524-8800 or by e-mail at [edooley@ari.org](mailto:edooley@ari.org).



February 4, 1999

Mr. Gerard Lavery Lederer  
Vice President  
Government and Industry Affairs Division  
Building Owners and Managers  
Association International  
1201 New York Avenue, N.W.  
Suite 300  
Washington, DC 20005

Dear Mr. Lederer:

During our recent discussion about tax incentives to help building owners replace CFC-chillers, I mentioned that ARI was developing an approach that would provide a two-fold benefit: a depreciation allowance on remaining years of equipment to encourage replacement of centrifugal and screw chillers and significantly reduced operating costs that result from installation of higher efficiency, non-CFC chillers. We hope this letter will form the basis for further discussion so that we can move forward to achieve tax adjustments that recognize the special burden borne by CFC chiller owners.

As background to this proposal, you should know that building owners and managers will achieve an estimated \$480 million in annual energy savings beginning in 2000 due to use of non-CFC chillers. However, approximately 64 percent of the CFC chillers remain in service, a full three years following the ban on production of CFC refrigerants. This proposal would recognize the challenge facing building owners who would like to replace their CFC chillers but are hampered by a tax code that allows depreciation of their current units over a 39-year period. Certainly Congress did not consider this problem when it accelerated the phase out of CFC production to the end of 1995.

The proposal we are asking you to consider would allow accelerated depreciation over a four-year period. Assuming that the incentive would increase replacements by about 25% in each of those years, the annual cost to the U.S. Treasury would be about \$25 million. In other words, instead of spreading depreciation over the life of the chiller, those owners who opted for early replacement could take one-quarter of remaining depreciation in each of the four years beginning in FY 2000.

ARI believes there are several reasons for replacement:

- **Energy efficiency:** Today's units can be 40% or more efficient than CFC chillers installed 20 years ago. By replacing their existing units, building owners and managers can benefit from significantly lower operating costs and realize an early payback from the cost of the chiller.
- **New units are virtually leak free,** reducing loss of refrigerant and need for a "charge"
- **As part of the Montreal Protocol,** the production of CFC's was banned as of January 1, 1996. There is a limited supply of virgin CFC's, as evidenced by the increased cost of CFC refrigerants.

On February 2, President Clinton re-introduced his Climate Change Technology Incentive, a \$6.3 billion program consisting of tax credits and incentives to stimulate adoption of more efficient technologies in buildings, industrial processes, vehicles, and power generation. While central air-conditioners and electric and ground source heat pumps, received a fair amount of attention in the proposal, chillers were not included. Therefore, ARI supports accelerated depreciation for chillers which we believe is a "win-win" for all involved: the government, ARI and its members, and building owners and managers. The government can cite both ozone layer protection, through faster phase-out and increased energy savings which helps curb production of global warming gases. ARI's chiller manufacturers benefit from an increase in sales. Building owners opting for the replacement option will realize tremendous savings in operating costs, not to mention the incentive from federal adoption of an accelerated depreciation plan.

Presently, buildings and "structural components" are depreciated over 39 years. As defined by the IRS, chillers are considered structural components. Obviously, under a 39-year system, absent a tax credit, there is a disincentive for replacing an existing unit. ARI estimates that only 36% (installed base of 80,000) CFC chillers have been replaced. However, according to the EPA, non-CFC units in 2000 will save 7 billion kilowatt hours per year, saving \$480 million in energy costs.

The concept ARI developed is a form of accelerated depreciation, but not one in the traditional sense that would accelerate depreciation from its current 39 to perhaps 20. We propose that the building owner, after making a replacement decision, should be allowed to take the remaining depreciation on the unit over a four-year period. For example, assume a building owner uses a 15-year old chiller. While the owner has depreciated the chiller for the past 14 years, using generally accepted accounting principles, 24 years remain for the owner to depreciate the remaining value of this asset. Our proposal would allow for the building owner to depreciate the remaining value in the next four years, once the decision is made to replace the existing unit.

We understand the proposal may be complex, and lacks some legislative precedent. Nevertheless, we believe it has merit and would like the opportunity to discuss it with you and seek your suggestions and commentary. We are open to a range of options that will accomplish the basic objective. We recognize that BOMA has significant experience in this area and we would benefit from your advice and support. I'll follow up with you to schedule a mutually convenient time.

If you have any questions in the meantime, please do not hesitate to call (703) 524-8800.

Very Sincerely,



W. Ted Leland

Vice President, Government Affairs

Attachments

# DOMESTIC CHILLER SHIPMENTS LTLC 2 M

| Year | Number of<br>Chillers<br>Sold | Number of<br>Chillers<br>Available to<br>be replaced | Value       | Remaining<br>Years | Remaining<br>Years<br>Depreciation | Depreciation<br>Amount<br>(Amount left<br>to depreciate) | Depreciation<br>Taken<br>To Date | Sensitivity Analysis                                   |                                                   |                                                   |
|------|-------------------------------|------------------------------------------------------|-------------|--------------------|------------------------------------|----------------------------------------------------------|----------------------------------|--------------------------------------------------------|---------------------------------------------------|---------------------------------------------------|
|      |                               |                                                      |             |                    |                                    |                                                          |                                  | Loss/Cost<br>to<br>U.S.<br>Treasury<br>(25% take adv.) | Loss/Cost<br>to<br>U.S.<br>Treasury<br>(35/25/15) | Loss/Cost<br>to<br>U.S.<br>Treasury<br>(15/25/35) |
| 1990 | 3348                          | 2411                                                 | 249,322,878 | 30                 | 0.769                              | 191,729,293                                              | 57,593,585                       | 3,019,736                                              | 4,227,631                                         | 1,811,842                                         |
| 1989 | 3432                          | 2471                                                 | 226,056,641 | 29                 | 0.744                              | 168,186,141                                              | 57,870,500                       | 2,648,932                                              | 3,708,504                                         | 1,589,359                                         |
| 1988 | 3191                          | 2298                                                 | 187,179,688 | 28                 | 0.718                              | 134,395,016                                              | 52,784,672                       | 2,116,722                                              | 2,963,410                                         | 1,270,033                                         |
| 1987 | 2779                          | 2001                                                 | 165,256,606 | 27                 | 0.692                              | 114,357,571                                              | 50,899,035                       | 1,801,132                                              | 2,521,584                                         | 1,080,679                                         |
| 1986 | 3113                          | 2241                                                 | 200,281,245 | 26                 | 0.667                              | 133,587,590                                              | 66,693,655                       | 2,104,005                                              | 2,945,606                                         | 1,262,403                                         |
| 1985 | 2913                          | 2097                                                 | 178,103,053 | 25                 | 0.641                              | 114,164,057                                              | 63,938,996                       | 1,798,084                                              | 2,517,317                                         | 1,078,850                                         |
| 1984 | 2407                          | 1733                                                 | 145,544,879 | 24                 | 0.615                              | 89,510,101                                               | 56,034,778                       | 1,409,784                                              | 1,973,698                                         | 845,870                                           |
| 1983 | 2503                          | 1802                                                 | 147,081,278 | 23                 | 0.589                              | 86,630,873                                               | 60,450,405                       | 1,364,436                                              | 1,910,211                                         | 818,662                                           |
| 1982 | 2317                          | 1668                                                 | 137,655,165 | 22                 | 0.564                              | 77,637,513                                               | 60,017,652                       | 1,222,791                                              | 1,711,907                                         | 733,674                                           |
| 1981 | 2661                          | 1916                                                 | 140,906,617 | 21                 | 0.538                              | 75,807,760                                               | 65,098,857                       | 1,193,972                                              | 1,193,972                                         | 1,193,972                                         |
| 1980 | 2840                          | 2045                                                 | 129,356,275 | 20                 | 0.513                              | 66,359,769                                               | 62,996,506                       | 1,045,166                                              | 1,045,166                                         | 1,045,166                                         |
| 1979 | 2031                          | 1462                                                 | 79,572,814  | 19                 | 0.487                              | 38,751,960                                               | 40,820,854                       | 610,343                                                | 610,343                                           | 610,343                                           |
| 1978 | 2101                          | 1513                                                 | 73,484,609  | 18                 | 0.461                              | 33,876,405                                               | 39,608,204                       | 533,553                                                | 533,553                                           | 533,553                                           |
| 1977 | 2100                          | 1512                                                 | 76,412,090  | 17                 | 0.435                              | 33,239,259                                               | 43,172,831                       | 523,518                                                | 523,518                                           | 523,518                                           |
| 1976 | 2093                          | 1507                                                 | 79,339,572  | 16                 | 0.41                               | 32,529,225                                               | 46,810,347                       | 512,335                                                | 512,335                                           | 512,335                                           |
| 1975 | 2893                          | 2083                                                 | 104,910,579 | 15                 | 0.385                              | 40,390,573                                               | 64,520,006                       | 636,152                                                | 636,152                                           | 636,152                                           |
| 1974 | 2744                          | 1976                                                 | 78,932,766  | 14                 | 0.359                              | 28,336,863                                               | 50,595,903                       | 446,306                                                | 446,306                                           | 446,306                                           |
| 1973 | 2536                          | 1826                                                 | 67,199,074  | 13                 | 0.333                              | 22,377,292                                               | 44,821,782                       | 352,442                                                | 211,465                                           | 493,419                                           |
| 1972 | 2598                          | 1871                                                 | 65,830,925  | 12                 | 0.308                              | 20,275,925                                               | 45,555,000                       | 319,346                                                | 191,607                                           | 447,084                                           |
| 1971 | 2700                          | 1944                                                 | 77,769,990  | 11                 | 0.282                              | 21,931,137                                               | 55,838,853                       | 345,415                                                | 207,249                                           | 483,582                                           |
| 1970 | 2850                          | 2052                                                 | 77,580,830  | 10                 | 0.256                              | 19,860,692                                               | 57,720,138                       | 312,806                                                | 187,684                                           | 437,928                                           |
| 1969 | 2709                          | 1950                                                 | 64,133,272  | 9                  | 0.231                              | 14,814,786                                               | 49,318,486                       | 233,333                                                | 140,000                                           | 326,666                                           |
| 1968 | 2758                          | 1986                                                 | 68,649,646  | 8                  | 0.205                              | 14,073,177                                               | 54,576,469                       | 221,653                                                | 132,992                                           | 310,314                                           |
| 1967 | 2727                          | 1963                                                 | 65,315,761  | 7                  | 0.179                              | 11,691,521                                               | 53,624,240                       | 184,141                                                | 110,485                                           | 257,798                                           |
| 1966 | 2671                          | 1923                                                 | 62,452,696  | 6                  | 0.154                              | 9,617,715                                                | 52,834,981                       | 151,479                                                | 90,887                                            | 212,071                                           |
| 1965 | 2381                          | 1714                                                 | 49,908,507  | 5                  | 0.128                              | 6,388,289                                                | 43,520,218                       | 100,616                                                | 60,369                                            | 140,862                                           |
|      |                               |                                                      |             |                    |                                    |                                                          |                                  | \$25,208,198                                           | \$31,313,954                                      | \$19,102,442                                      |

## Assumptions:

As defined by the Internal Revenue Service, chillers are structural components, accordingly, they are depreciated over 39 years.

ARI estimates that 28% of existing chillers have been replaced. 72% are potential replacements for building owners.

ARI estimates that 25% of current building owners would take advantage of an "incentive" encouraging replacement of chillers with a new CFC-free chiller.

The sensitivity analysis reflects different costs which are dependent upon the percentage of building owners taking advantage of the incentive.

Corporate income tax rate of 35% is considered in "Loss/Cost to U.S. Treasury"

The incentive is defined as a building owner being able to write-off any used depreciation over the first four years following purchase of a new chiller.

The "Cost/Loss to the U.S. Treasury is defined as the "incentive" the building owner would obtain, after purchase of a new unit, multiplied by the corporate income tax rate multiplied by the percentage of existing building owners who would take advantage of this proposed incentive.

**TOTAL COST TO THE FEDERAL GOVERNMENT OVER 4 YEARS IS = \$100,832,792**

6/24/99

Chiller Depreciation

Draft: May 7, 1999

## **Options for Energy-related Tax Incentives**

1. Further expand the biomass tax credit.
2. Renewable Energy Tax Credit Auction
3. Stimulate purchases of highly efficient appliances
4. Industrial Energy Efficiency
5. High-efficiency electric pumps for oil
6. Clean Coal Technology Deployment
7. Tax Treatment of Nuclear Power
8. Wetland Protection. (Functions as a carbon sink).



## Options for Energy-related Tax Incentives

### 1. Further expand the biomass tax credit.

- The February 1999 proposal provides a 1.0 cent per kWh credit for biomass that is co-fired in coal plants. However, After June 30, 2004, no funding is provided for plants that co-fire, even if they begin co-firing before that date. This limit is fine for some co-firing which requires little adjustment at the coal plant. Yet, some biomass co-firing requires a significant capital investment and would not likely be undertaken by a producer unless the pay out time were extended.
- An expansion of the February 1999 proposal would allow for that biomass co-firing that requires a significant capital investment would receive a production tax credit to for ten years after the initial capital investment. Similar to the wind production tax credit, the opportunity to receive the ten year credit would be limited to those investments completed prior to June 30, 2004. For those biomass co-firing plants which do not require a significant capital outlay, the credit would end on June 30, 2004.

### 2. Renewable Energy Tax Credit Auction

- Set a maximum budget outlay, then auction out a production tax credit to any new renewable plant according to the lowest bidder (Hydropower limited to "low-head" plants). (This concept has been a success for renewables in California). Wind and biomass facilities would only be allowed to take one federal tax credit. Lost revenues would be whatever the maximum outlay is set at, and the credit could be capped. If a generator bids less than the cap, it would only receive a tax credit at the value it bid.

### 3. Stimulate purchases of highly efficient appliances

- Ground Source Heat Pumps – 20 percent investment tax credit. High cost for initial investment but significant cost-effective energy savings. These heat pump systems are the most energy-efficient, environmentally clean, and cost-effective space conditioning systems available, providing a reduction in energy consumption – and corresponding emissions – of over 40% compared to air source heat pumps and of over 70% compared to electric resistance heating.
- Integrated natural gas water heating and space heating combination units.

- Compact Fluorescent Torchiere Lamps – 20 percent investment tax credit. The technology provides energy savings greater than 50 percent, and its prices is significantly greater than the standard lamp.
- Other Compact Fluorescents.

#### 4. Industrial Energy Efficiency

- Combined Heat and Power. The current proposal for combined heat and power gives an 8 percent investment credit for plants put in service in the three years 2000–2002. This does not provide enough time to scope out a project and build it before the credit expires. The incentive could be more effective if it gave a 10 percent credit covering the four year time period 2001 – 2004.
- Energy efficient motors. 90% of the motors that fail get repaired instead of replaced new. This means that the stock of installed motors throughout industry tends to stay as standard efficient. Tax incentives on the new product may help to accelerate stock turnover to more efficient motors. DOE-OIT estimates that energy efficient industrial motor upgrades could save U.S. industry up to \$1 billion per year and 5 million metric tons of carbon emissions.
- Energy efficiency services. Industrial end users would be able to write off the cost of procuring the services of outside companies, such as energy service companies (ESCOs) and process engineering firms to assess and design for energy efficiency improvements. Industry would benefit from investing more time on the front end of new capital expansion to analyze the total life cycle costs and full system efficiency opportunities.
- Energy metering equipment and services: Industrial end users would receive tax incentives for equipment and services that would more effectively measure and monitor how energy is used throughout their facilities. The idea here is if industry knew more precisely where their energy costs were located, then their energy management programs and practices would be more targeted and effective. Likewise, the operations using the most energy in a facility would have an incentive to save energy to reduce their respective production costs, charging the departments for the energy that they used, and reward the departments that are reducing energy costs.

#### 5. High-efficiency electric pumps for oil

- 20% investment tax credit (ITC) for the cost of installing a new high-efficiency electric pump at oil wells.

- Most of the oil wells in the U.S. use electric pumps to pump the oil (and associated water) to the surface. Providing an incentive for these wells to invest in new, higher-efficiency electric motors for these pumps would reduce electricity consumption and reduce carbon emissions into the atmosphere. Other capital improvements to improve efficiency may include the installation of timers on the pumping units to only operate when necessary and the installation of secondary capacitors to correct the power factor.

## 6. Clean Coal Technology Deployment

- The Coal Utilization Research Councils recommends a 3 part incentive package (see summary attachment) covering the years 2000 to 2012:
  - (1) an Investment Tax Credit equal to 10 percent of the total project cost.
  - (2) A Production Tax Credit averaging about 1.0 cent per kWh for 10 years of operation and based on the design net heat rate, and
  - (3) a Risk Pool to offset costs, if any, for modifications resulting from the technology's failure to achieve its design performance during start-up and initial operation, limited to 5% of the total installed cost of the project.
- Estimated revenue lost in the 2000 to 2004 time period is \$273 million with costs increasing in the years after 2004.

## 7. Tax Treatment of Nuclear Power

- Decommissioning funds (this tax treatment may be resolved according to NE). When utilities have tried to sell their nuclear assets, there has been the problem that the funds saved for the decommissioning of those plants is taxed heavily. This taxation is penalty against existing nuclear power which emits no greenhouse gases.
- The Office of Nuclear Energy suggests **Enhance the productivity of existing power plants.** Tax credit for equipment replacement or upgrades such as steam generator replacement or upgrade of obsolete analog instrumentation and controls with modern, more reliable digital equipment; license renewal; and power uprate licensing activities increase the net electrical output from an existing nuclear power plant. The increased net electrical output can result from (i) increasing the number of hours a unit operates in a year, (ii) increasing the number of years a unit operates, and/or (iii) increasing the power output per hour from the unit. These activities are to be eligible for tax incentives. Tax credits will be applicable to capital investments for upgrades and licensing activities exceeding a prescribed minimum amount.

- The Office of Nuclear Energy suggests tax credits for research and development. Any R&D conducted which decreases the capital investment, improves the construction time required to build a new nuclear power plant, or increases the efficiency of ALWRs is also eligible for a tax credit equal to a prescribed percentage of the R&D investment

8. Wetland Protection. (Functions as a carbon sink).

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# General Explanations of the Administration's Revenue Proposals

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Department of the Treasury  
February 1999

## **Promote Energy Efficiency and Improve the Environment**

### **PROVIDE TAX CREDIT FOR ENERGY-EFFICIENT BUILDING EQUIPMENT**

#### **Current Law**

No income tax credit is provided currently for investment in energy-efficient building equipment.

#### **Reasons for Change**

A credit for types of building equipment that are substantially more energy efficient than conventional equipment will help to accelerate the development and distribution of energy-efficient technologies. A credit would reduce costs to consumers, increasing demand for the equipment and reducing manufacturing costs, while also spurring technological innovation and reducing energy consumption.

#### **Proposal**

A credit of 10 percent of the purchase price (up to a maximum of \$250 per unit) would be allowed for the purchase after December 31, 1999 and before January 1, 2002 of the following building equipment:

Electric heat pumps (equipment using electrically powered vapor compression cycles to extract heat from air in one space and deliver it to air in another space) with a heating efficiency of at least 9 HSPF (Heating Seasonal Performance Factor) and a cooling efficiency of at least 13.5 SEER (Seasonal Energy Efficiency Rating).

Central air conditioners with an efficiency of at least 13.5 SEER.

Advanced natural gas water heaters (equipment using a variety of mechanisms to increase steady-state efficiency and reduce standby and vent losses) with an Energy Factor of at least 0.65 in the standard Department of Energy (DOE) test procedure.

A credit of 20 percent of the purchase price would be allowed for the purchase after December 31, 1999 and before January 1, 2004 of the following building equipment:

Fuel cells (equipment using an electrochemical process to generate electricity and heat) with an electricity-only generation efficiency of at least 35 percent and a minimum generating capacity of 5 kilowatts. The maximum credit would be \$500 per kilowatt of capacity.

Electric heat pump hot water heaters (equipment using electrically powered vapor compression cycles to extract heat from air and deliver it to a hot water storage tank) with

an Energy Factor of at least 1.7 in the standard DOE test procedure. The maximum credit would be \$500 per unit.

Electric heat pumps with a heating efficiency of at least 9 HSPF and a cooling efficiency of at least 15 SEER. The maximum credit would be \$500 per unit.

Central air conditioners with an efficiency of at least 15 SEER. The maximum credit would be \$500 per unit.

Advanced natural gas water heaters with an Energy Factor of at least 0.80 in the standard DOE test procedure. The maximum credit would be \$500 per unit.

Natural gas heat pumps (equipment using either a gas-absorption cycle or a gas-driven engine to power the vapor compression cycle to extract heat from one source and deliver it to another) with a coefficient of performance for heating of at least 1.25 and for cooling of at least 0.70. The maximum credit would be \$1,000 per unit.

A credit would be allowed only for final purchases from unrelated third parties. The credit would be nonrefundable. Credits for equipment used for business purposes would be subject to the limitations on the general business credit and would reduce the basis of the equipment.

## **TAX CREDIT FOR PURCHASE OF ENERGY EFFICIENT NEW HOMES**

### **Current law**

No deductions or credits are provided currently for the purchase of energy-efficient new homes.

### **Reasons for change**

Residences, which account for about one-sixth of all U.S. greenhouse gases, offer one of the largest single sources of carbon saving potential. Some States and certain Federal programs require new houses to meet Model Energy Code standards for insulation and related construction standards, and for heating, cooling and hot water equipment. By the use of cost-effective means, many new homes could reduce energy consumption by 30 to 50 percent or more compared to the standards in the Model Energy Code or the more recent 1998 International Energy Conservation Code (IECC). A targeted credit for such highly energy-efficient new housing could increase the use of energy-efficient building practices and efficient heating and cooling equipment. In addition, it may help spur innovation in the ways that houses are designed and built, thereby providing significant energy-saving and environmental benefits over the long term.

### **Proposal**

A tax credit of up to \$2,000 would be available to purchasers of highly energy-efficient new homes that meet energy-efficiency standards for heating, cooling and hot water that significantly exceed those of the IECC. A taxpayer may claim the credit only if the new home is the taxpayer's principal residence and reduces energy use by prescribed amounts as compared to the IECC for single family residences. The tax credit would be \$1,000 for new homes that are at least 30 percent more energy efficient than the IECC standard, and that are purchased in the two-year period beginning January 1, 2000 and ending December 31, 2001. The tax credit would be \$1,500 for new homes that are at least 40 percent more energy efficient than the IECC standard, and purchased in the three-year period beginning January 1, 2000 and ending December 31, 2002. The tax credit would be \$2,000 for new homes that are at least 50 percent more energy efficient than the IECC standard, and purchased in the five-year period beginning January 1, 2000 and ending December 31, 2004.



## **EXTEND TAX CREDIT FOR ELECTRIC VEHICLES AND PROVIDE TAX CREDIT FOR CERTAIN FUEL-EFFICIENT HYBRID VEHICLES**

### **Current Law**

No generally available income tax credit for purchases of fuel-efficient vehicles is provided currently. A 10-percent tax credit is provided for the cost of a qualified electric vehicle, up to a maximum credit of \$4,000. A qualified electric vehicle is a motor vehicle that is powered primarily by an electric motor drawing current from rechargeable batteries, fuel cells, or other portable sources of electric current, the original use of which commences with the taxpayer, and that is acquired for use by the taxpayer and not for resale. The full amount of the credit is available for purchases prior to 2002. The credit begins to phase down in 2002 and does not apply to vehicles placed in service after 2004.

Certain costs of qualified clean-fuel vehicle property may be deducted when such property is placed in service. Qualified electric vehicles do not qualify for the clean-fuel vehicle deduction. The deduction begins to phase down in 2002 and does not apply to property placed in service after 2004.

### **Reasons for Change**

The transportation sector now accounts for one-third of greenhouse gas emissions in the United States. Cars, sport utility vehicles, light trucks and minivans alone account for 20 percent of our greenhouse gas emissions.

The proposed credits will encourage the early introduction and purchase of vehicles that incorporate new fuel-efficient technologies and will help to move ultra fuel-efficient vehicles with two or three times the fuel efficiency of today's vehicles from the laboratory to the highway. These vehicles can significantly reduce emissions of carbon dioxide, the most prevalent greenhouse gas.

### **Proposal**

The proposal would extend the present credit for qualified electric vehicles and provide temporary tax credits for fuel-efficient hybrid vehicles:

- (1) Credit for electric vehicles. The phase down of the credit for electric vehicles would be eliminated and the credit would be extended through 2006. Thus, the maximum \$4,000 credit would be available for purchases before 2007.
- (2) Credit for fuel-efficient hybrid vehicles. The credit would be: (a) \$1,000 for each vehicle that is one-third more fuel efficient than a comparable vehicle in its class, effective for purchases of qualifying vehicles after December 31, 2002 and before January 1, 2005; (b) \$2,000 for each vehicle that is two-thirds more fuel efficient than a comparable vehicle in

its class, effective for purchases of qualifying vehicles after December 31, 2002 and before January 1, 2007; (c) \$3,000 for each vehicle that is twice as fuel efficient as a comparable vehicle in its class, effective for purchases of qualifying vehicles after December 31, 2003 and before January 1, 2007; and (d) \$4,000 for each vehicle that is three times as fuel efficient as a comparable vehicle in its class, effective for purchases of qualifying vehicles after December 31, 2003 and before January 1, 2007.

A qualifying hybrid vehicle would be a vehicle powered by onboard fuel which uses regenerative braking and an energy storage system that will recover at least 60 percent of the energy in a typical 70-0 braking event. A qualifying vehicle would have to meet all emission requirements applicable to gasoline-powered automobiles.

These credits would be available for all qualifying light vehicles including cars, minivans, sport utility vehicles, and light trucks. Taxpayers who claim one of these credits would not be able to claim the qualified electric vehicle credit or the deduction for clean-fuel vehicle property for the same vehicle.

## **INVESTMENT TAX CREDIT FOR COMBINED HEAT AND POWER (CHP) SYSTEMS**

### **Current law**

Combined heat and power (CHP) systems are used to produce electricity (and/or mechanical power) and usable thermal energy from a single primary energy source. Depreciation allowances for CHP property vary by asset use and capacity. Assets employed in the production of electricity used by the taxpayer in an industrial manufacturing process or plant activity (and not ordinarily available for sale to others) have a general cost recovery period of 15 years if rated with total capacity in excess of 500 kilowatts. Electricity production assets of lesser rated capacity generally are classified with other manufacturing assets and have cost recovery periods of five to ten years. Assets used in the production of electricity for sale have either a 15-year or 20-year recovery period. For assets that are structural components of buildings, however, the recovery period is either 39 years (if nonresidential) or 27.5 years (if residential), and the straight-line method for computing depreciation allowances must be used. For assets with recovery periods of 10 years or less, the 200 percent declining balance method may be used to compute depreciation allowances. The 150 percent declining balance method may be used for assets with recovery periods of 15 or 20 years.

### **Reasons for change**

Combined heat and power systems utilize thermal energy that is otherwise wasted in producing electricity by more conventional methods. CHP systems achieve a greater level of overall energy efficiency, and thereby lessen the consumption of primary fossil fuels, lower total energy costs, and reduce carbon emissions. An investment tax credit for CHP assets is expected to encourage increased energy efficiency by accelerating planned investments and inducing additional investments in such systems. The increased demand for CHP equipment should, in turn, reduce CHP production costs and spur additional technological innovation in improved CHP systems.

### **Proposal**

The proposal would establish an 8-percent investment credit for qualified CHP systems with an electrical capacity in excess of 50 kilowatts or with a capacity to produce mechanical power in excess of 67 horsepower (or an equivalent combination of electrical and mechanical energy capacities). CHP property would be defined as property comprising a system that uses the same energy source for the simultaneous or sequential generation of (1) electricity or mechanical shaft power (or both) and (2) steam or other forms of useful thermal energy (including heating and cooling applications). A qualified CHP system would be required to produce at least 20 percent of its total useful energy in the form of thermal energy and at least 20 percent of its total useful energy in the form of electrical or mechanical power (or a combination thereof) and would also be required to satisfy an energy-efficiency standard. For CHP systems with an electrical capacity in excess of 50 megawatts (or a mechanical energy capacity in excess of 67,000 horsepower), the total energy

efficiency of the system would have to exceed 70 percent. For smaller systems, the total energy efficiency would have to exceed 60 percent. For this purpose, total energy efficiency would be calculated as the sum of the useful electrical, thermal, and mechanical power produced by the system at normal operating rates, measured on a Btu basis, divided by the lower heating value of the primary fuel source for the system supplied. The credit would be allowed with respect to qualified CHP property only if its eligibility is verified under regulations prescribed by the Secretary of the Treasury. The regulations would require taxpayers claiming the credit to obtain proper certification by qualified engineers that the system meets the energy-efficiency and percentage-of-energy tests.

Investments in qualified CHP assets that are otherwise assigned cost recovery periods of less than 15 years would be eligible for the credit, provided that the taxpayer elected to treat such property as having a 22-year class life. Thus, regular tax depreciation allowances would be calculated using a 15-year recovery period and the 150 percent declining balance method.

The credit would be treated as energy property under the investment credit component of the section 38 general business credit, and would be subject to the rules and limitations governing such property. Thus, only property placed in service in the United States would be eligible for the credit, and the basis of qualified property would be reduced by the amount of the credit. Regulated public utilities claiming the credit would be required to use a normalization method of accounting with respect to the credit. Taxpayers using the credit for CHP equipment would not be entitled to any other tax credit for the same equipment.

The credit would apply to investments in CHP equipment placed in service after December 31, 1999, but before January 1, 2003.

## **PROVIDE TAX CREDIT FOR ROOFTOP SOLAR EQUIPMENT**

### **Current Law**

A 10-percent investment tax credit is provided to businesses for qualifying equipment that uses solar energy to generate electricity, to heat or cool or to provide hot water for use in a structure, or to provide solar process heat.

### **Reasons for Change**

A tax credit for rooftop solar photovoltaic systems and solar water heating systems will reduce the cost of these investments and encourage individuals and businesses to adopt these systems. Heat and electricity from these sources produce no greenhouse gasses.

### **Proposal**

Under this proposal, a tax credit would be available for purchasers of rooftop photovoltaic systems and solar water heating systems that are located on or adjacent to a building and are used exclusively for purposes other than heating swimming pools. The credit would be equal to 15 percent of qualified investment up to a maximum of \$1,000 for solar water heating systems and \$2,000 for rooftop photovoltaic systems. This credit would be nonrefundable. For businesses, this credit would be subject to the limitations of the general business credit. The depreciable basis of the qualified property would be reduced by the amount of the credit claimed. The credit would apply only to equipment placed in service in the five-year period after December 31, 1999 and before January 1, 2005 for solar water heating systems and for the seven-year period after December 31, 1999 and before January 1, 2007 for rooftop photovoltaic systems. Taxpayers would have to choose between the proposed credit and the present tax credit for each investment.

## **EXTEND WIND AND BIOMASS TAX CREDIT AND EXPAND ELIGIBLE BIOMASS SOURCES**

### **Current Law**

Current law provides taxpayers a 1.5-cent-per-kilowatt-hour tax credit for electricity produced from wind or "closed-loop" biomass (organic material from a plant which is planted exclusively for purposes of being used at a qualified facility to produce electricity). The electricity must be sold to an unrelated third party and the credit is limited to the first 10 years of production. The credit applies only to facilities placed in service before July 1, 1999. The credit amount is indexed for inflation after 1992.

### **Reasons for Change**

The tax credit helps make electricity produced from wind and biomass competitive with other forms of electricity. Expanding eligible biomass sources will increase the use of this renewable energy source. Electricity from these sources produces no greenhouse gases.

### **Proposal**

The proposal would extend the current credit for five years, to facilities placed in service before July 1, 2004, and would expand eligible biomass sources for facilities placed in service before July 1, 2004. In addition, biomass that is co-fired in coal plants to produce electricity would be eligible for the credit at a reduced rate (1.0 cent per kilowatt hour adjusted for inflation after 1999) through June 30, 2004. Biomass qualifying for the credit would include (in addition to closed-loop biomass) any solid, nonhazardous, cellulosic waste material, that is segregated from other waste materials, and that is derived from the following forest-related resources: mill residues, pre-commercial thinnings, slash and brush, but not including old growth timber, waste pallets, crates, and dunnage, and landscape or right-of-way tree trimmings, and biomass derived from agriculture sources, including orchard tree crops, vineyard grain, legumes, sugar, and other crop-by-products or residues. Unsegregated municipal solid waste (garbage) would not qualify for the credit.

## Climate Change Tax Incentives: Options

1. Tax credit for energy efficient new homes (currently 1% of sales price, maximum credit \$2,000 for homes that are at least 50% more energy efficient than the model energy code (MEC):

- a. \$2,000 flat credit with
- (i) 50% more energy efficient than MEC <sup>cost</sup> \$200m
  - (ii) 40% more energy efficient than MEC
  - (iii) 30% more energy efficient than MEC \$1 bill.

- b. \$1,000 for 40%; \$2,000 for 50%

- c. \$1,000 for 40% for 2 years; \$2,000 for 50%.

2. 20% tax credit for energy efficient building equipment:

- a. Allow a 2 year credit for 14 SEER central air conditioners and electric heat pumps (currently 15 SEER) capped at \$250 (instead of \$500); *Industry wants 13*
- b. Allow a 2 year credit for gas water heaters with .72 efficiency (currently .8); *(Allied Signal / Grex)*
- c. Fuel cells: lower minimum acceptable size from 50 kw.
- d. Add ground source heat pumps. *Do progression schedule here also*

3. 15% tax credit for rooftop solar systems: no change.

4. 10% credit for combined heat and power systems: *(Leave for now)*  
Looking at whether turbogenerators are included in the present credit.

5. 10% credit for replacement circuit breakers: *(ABB) (SF6 is the gas)*

- a. Extend the credit the remanufactured units.  
*- consider remanufactured units as well*

6. 10% credit for PFC and HFC recycling equipment: no change. *(semiconductor industry)*

7. \$3,000/\$4,000 credit for purchase of fuel efficient vehicles:  
(several options already estimated). *skip*

8. Equalize the tax treatment of parking and transit benefits:

- a. no change
- b. drop this proposal?

9. Extend the tax credit for electricity produced from wind and closed-loop biomass (The current proposal would extend for five years the present 1.5 cents per kWh adjusted for inflation after 1992 for facilities placed in service before July 1, 1999):

- a. Allow co-firing with coal in coal plants that are not covered under the Clean Air Act Amendments of 1990.
- b. Allow specific agricultural waste residues (such as timber slash and thinnings,

*maybe do a graduated scale with lower levels (30% initially) dropping off.*

- certain agricultural waste, and waste wood).
- c. All of the above.
- d. All of the above, but allow co-firing in all coal plants.
- e. Allow poultry waste.

Other:

- 10. Tax credit for reforestation (currently 10% credit for reforestation costs up to \$10,000 of expenditures and 7-year amortization):
  - a. Increase or eliminate the \$10,000 limit on eligible expenditures;
  - b. Shorten the amortization period to 5-years;
  - c. Allow timber growers to make tax-deductible deposits from timber harvest receipts into a tax-deferred account.
- 11. Tax credit for conservation tillage equipment

December 7, 1998

12. energy star for washing machines and lighting?  
13. something on alternative fuels?



## **ENERGY EFFICIENCY TAX INCENTIVES**

The bill provides for \$3.6 billion in tax incentives over 5 years to decrease energy costs for American families and businesses, increase our economic competitiveness, lower our dependence on foreign oil, and protect our environment through improved air quality and reduced emissions of greenhouse gases.

This environmentally and economically sound package of tax credits covers four sectors of the economy. Specifically, the bill includes:

### **Buildings**

- ***A 20 % credit for highly energy efficient building equipment to reduce costs to both consumers and manufacturers.*** This credit will encourage the purchase of fuel cells, electric heat pump water heaters, natural gas water heaters, electric and natural gas heat pumps, and advanced central air conditioners.
- ***Up to \$2,000 credit to consumers who purchase new energy efficient homes.*** This credit will increase the use of energy efficient building practices and help spur innovation in housing design and construction, providing significant long-term environmental and economic benefits.

### **Electricity**

- ***An Extension of credit for electricity produced from wind and biomass.*** This credit helps make electricity produced from wind and biomass, which produce no greenhouse gas emissions, competitive with other forms of electricity.

### **Industry**

- ***A 10% credit for combined heat and power systems.*** This credit will encourage and accelerate investment in these systems which use energy otherwise wasted to achieve greater efficiency, lower energy costs and reduce emissions of greenhouse gases.

### **Transportation**

- ***Equalizes treatment of parking and transit benefits.*** This proposal would allow employers to offer transit and vanpool benefits in lieu of compensation thus equalizing the tax incentives provided for these benefits and parking benefits.

- ***Up to \$4,000 credit to consumers who purchase highly efficient vehicles.*** This credit will help move vehicles with two to three times the fuel efficiency of today's vehicles from the laboratory to the highway.

# President Clinton's FY 2001 Climate Change Budget

*"The greatest environmental challenge of the new century is global warming . . . If we fail to reduce the emission of greenhouse gases, deadly heat waves and droughts will become more frequent, coastal areas will flood, and economies will be disrupted. That is going to happen, unless we act. Many people . . . still believe you cannot cut greenhouse gas emissions without slowing economic growth. In the Industrial Age that may well have been true. But in this digital economy, it is not true anymore. New technologies make it possible to cut harmful emissions and provide even more growth."*

-- President Bill Clinton, State of the Union Address, January 27, 2000

**Meeting the Challenge of Global Warming.** Against a backdrop of growing scientific consensus that the Earth is warming – and that human activities are at least partly to blame – President Clinton's FY 2001 budget is proposing \$2.4 billion (a 43 percent increase over FY 2000 enacted levels) in funding to combat global climate change. This includes a series of new initiatives, such as accelerated efforts to develop clean energy sources both at home and abroad and a new Clean Air Partnership Fund to boost state and local efforts to reduce greenhouse gases and air pollution, as well as a five-year package of tax incentives to spur clean energy technologies and increased investment for R&D in energy efficient technology and renewable energy. In addition, the President is proposing more than \$1.7 billion for global change research, for a total package for FY 2001 of over \$4 billion.

**International Clean Energy Initiative.** To help accelerate the development and deployment of clean energy technologies around the world, President Clinton is proposing \$201 million (a more than 100 percent increase over FY 2000 enacted levels) for a multi-agency initiative to encourage open competitive markets; remove market barriers in developing countries to clean energy technologies; and to provide new incentives for clean energy technology innovation and export. The initiative will promote U.S. clean energy exports, create high-value jobs, and assist developing countries in fighting air pollution and climate change.

**Bioenergy & Bio-based Products Initiative.** The budget includes \$289 million to accelerate the development of bio-based technologies, which convert crops, trees and other "biomass" into a vast array of fuels and products – an increase of \$93 million over FY 2000 enacted levels. In addition to helping meet environmental challenges like global warming, this initiative will increase the viability of alternative energy sources, support farm incomes, and diversify and strengthen the rural economy.

**Clean Air Partnership Fund.** The President proposes \$85 million for a new fund to provide grants to state and local governments for projects that reduce both greenhouse gases and pollutants like soot, smog, and air toxics.

**Climate Change Technology Initiative (CCTI).** The CCTI is a package of targeted tax incentives and investments aimed at increasing energy efficiency and spurring the broader use of renewable energy. The package will save consumers money and reduce greenhouse gas emissions at the same time. CCTI investments have risen substantially each of the past two years. The President's new budget proposes a still more accelerated effort.

**\$4.0 billion in Tax Incentives over 5 years.** The proposed package contains \$4.0 billion over five years in tax cuts (\$201 million for FY 2001) for consumers who purchase energy efficient products and for producers of energy from renewable sources. This year's CCTI tax package is \$400 million greater than last year's proposed five-year package. Highlights include:

- Tax credits for energy efficient homes. Consumers can receive a \$1000-2000 credit toward the purchase of a new energy efficient home; a 20 percent tax credit for the purchase of selected energy efficient products for homes and buildings; and a \$1000-2000 credit for installing a solar energy system.

- Tax credits for fuel-efficient cars. The package extends the current tax credit (of up to \$4000) through 2006 for qualified electric and fuel cell vehicles and also includes a tax credit of \$500-3000 for the purchase of a qualifying hybrid vehicle from 2003-2006.
- Tax credits for clean energy. The package extends the 1.5 cent per kilowatt hour tax credit for the production of electricity from wind and closed-loop biomass; provides credits for open-loop biomass facilities and coal-biomass cofiring; and provides credits for electricity produced from methane from certain landfills.

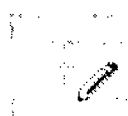
**\$1.4 billion for Energy Efficiency & Clean Energy.** The proposed package contains over \$1.4 billion in FY 2001 to research, develop, and deploy clean technologies for the four major carbon-emitting sectors of the economy -- buildings, transportation, industry, and electricity -- a 30 percent increase over the amount appropriated in FY 2000. Highlights include:

- Partnership for a New Generation of Vehicles. PNGV is a government-industry effort to develop comfortable, affordable cars that meet all applicable safety and environmental standards and get up to three times the fuel efficiency of today's cars. The combined proposal for PNGV in the FY 2001 budget is \$255 million, an increase of \$30 million over FY 2000 enacted levels.
- Partnership for Advancing Technology in Housing. PATH is a government-industry partnership to improve the energy efficiency of new homes by more than 50 percent and to retrofit 15 million existing homes to make them 30 percent more energy efficient within a decade. The FY 2001 budget request for building efficiency efforts, such as PATH, Energy Star, and Building America, totals \$275 million, a 42 percent increase over FY 2000 appropriations.
- Renewable Energy. The President proposes \$410 million for the Department of Energy's solar and renewable energy programs, a 32 percent increase over the amount appropriated in FY 2000. The package includes expanded efforts in key renewable technologies, such as wind, bioenergy, photovoltaics, and geothermal energy.

**Cleaner Fossil Fuels.** The budget request contains \$233 million for R&D to develop next-generation technologies for coal combustion with much higher energy efficiency and lower greenhouse gas emissions.

**Weatherization & State Energy Grants.** The budget request includes \$191 million -- a \$22 million increase over FY 2000 appropriations -- to deliver energy conservation services to low-income Americans and to assist state energy offices in addressing their energy priorities.

**U.S. Global Change Research Program.** The FY 2001 request includes over \$1.7 billion for scientific research to improve our understanding of human and natural forces that influence the Earth's climate system and to assess the likely consequences of global warming.

 Paul Bledsoe  
02/02/2000 05:05:36 PM

Record Type: Record

To: Elizabeth R. Newman/WHO/EOP@EOP, John D. Gibson/WHCCTF/EOP@EOP  
cc: Elliot J. Diringier/CEQ/EOP@EOP, Jefferson B. Seabright/WHCCTF/EOP@EOP, Roger S. Ballentine/WHO/EOP@EOP  
Subject: WSJ and CBS Climate Change/Clean Energy Stories



bud.fy2001.taxfin.dobud.fy2001.cleaneng.dAttached are the backgrounders we provided CBS and WSJ. Jen Palmieri also asked me to get them to AP embargoed until midnight and CNN embargoed until 7am tomorrow. The primary focus will be on the economic opportunities which are now available through improved technology and energy efficiency. For example, our Clean Energy for the 21st Century Initiative aims to double US clean energy tech exports by 2005, creating as much as \$5 billion in new export revenues for US companies and as many as 100,000 new US jobs while helping curb global warming pollution.

Likewise, our tax credits for consumers who purchase clean energy autos and homes helps spur production of energy efficient transportation and housing. In short, this initiative will spur economic growth, help us expand exports and help the environment as well.

The total FY 2001 budget for Climate Change -related solutions and actions is \$2.4 billion(including \$200 million in tax credits), a 42% increase over FY2000 enacted, but we are not providing a breakdown of this overall budget number. Please call me at 395-2345 with any questions. thanks.

# Clean Energy for the 21<sup>st</sup> Century: International Initiative

To accelerate the development and deployment of clean energy technologies around the world, President Clinton is proposing the Clean Energy for the 21<sup>st</sup> Century: International Initiative – a \$200 million multi-agency effort (a more than 100 percent increase) to encourage open competitive markets and remove market barriers to clean energy technologies in developing and transition countries and to provide new incentives for clean energy technology innovation and export. This initiative will promote U.S. exports and create high-value jobs, and will assist countries power their economic development while fighting air pollution and climate change.

**Window of Opportunity for America and the World.** Developing country energy use will overtake that of industrial countries by 2020. These energy technology markets are projected to total \$4 to \$5 trillion over the next 20 years and \$15 to \$25 trillion over the next 50 years. Developing country energy use is expected to account for three-fourths of the increase in global energy use between now and 2050.

Advanced, low-polluting energy technologies can provide these energy services efficiently, but existing markets often do not value these benefits. In addition, environmentally superior options often carry higher up-front costs, may be unfamiliar, or are perceived as more risky by decision-makers in developing countries. The initiative builds on a recent set of recommendations by the President's Committee of Advisors on Science and Technology (PCAST) and is directed at leveling the playing field between cleaner U.S. energy technologies and services and polluting alternatives.

**Real Benefits At Home and Abroad.** The initiative will help lay the technical and policy foundation that will allow developing and transition countries to build a clean energy future, leapfrogging past the polluting energy technologies used by the industrial countries, while building competitive markets open to U.S. firms. The goals of this initiative include:

- Doubling clean energy technology exports by 2005, creating as much as \$5 billion in new export revenues for U.S. companies and as many as 100,000 new U.S. jobs.
- Cutting energy use in targeted country buildings and appliances in half through advanced building design tools and building equipment codes and standards.
- Developing integrated renewable energy technologies that have the potential to power the full range of energy services for the 2 billion people in developing countries that do not now have electricity.
- Sharply reducing sulfur, particulate, and greenhouse gas emissions by developing advanced coal-fired power plants and low-cost hydrogen fuels.
- Maximizing use of combined heat & power systems through technical and policy assistance.
- Reducing transition and developing country methane emissions from pipelines and other fossil

sources by an amount equal to 100 million metric tons of carbon per year by 2005.

- Providing technical and policy support to encourage the development of natural gas grids.
- Reducing energy use in the industrial sector through the introduction of best practice methods, including advanced sensors and controls, and energy efficient motor drive systems.
- Conducting research in nuclear energy to address cost, waste, safety, and proliferation concerns.

**Initiative Structure.** This initiative will encourage public-private partnerships with foreign counterparts to demonstrate clean energy technologies, drive down their cost, and facilitate private sector financing for their large-scale deployment. It will encourage open, competitive markets while protecting public interests. The initiative will employ a range of proven policy tools, including U.S. technical and policy assistance to developing countries through personnel exchanges, conducting collaborative R&D with key foreign research groups, developing integrated renewable energy, energy efficiency, and advanced fossil energy technologies and pilot projects, and providing a range of trade supports to expand clean energy exports.

The initiative's requested \$103 million increase for these activities includes an additional \$49 million for activities at the Department of Energy; \$30 million for the U.S. Agency for International Development; \$15 million for the Export-Import Bank; \$5 million for the Trade and Development Agency; and, \$4 million for the Department of Commerce.

## Climate Change Technology Initiative: \$4.0 Billion in Tax Incentives

The President is proposing a new \$4.0 billion package in tax incentives over five years to help reduce greenhouse gas emissions by spurring the purchase of energy efficient products and the use of renewable energy (see Table 2).

**Table 2. CCTI Tax Incentives (\$ in Millions)**

|                            |                                                                                                                                                                                                                  | <b>Revenue Effect</b> |                          |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|--------------------------|
|                            |                                                                                                                                                                                                                  | <b>FY 2001</b>        | <b>Total<br/>FY01-05</b> |
| <b>Homes and Buildings</b> |                                                                                                                                                                                                                  |                       |                          |
|                            | Provide tax credit for energy efficient building equipment                                                                                                                                                       | -18                   | -201                     |
|                            | Provide tax credit for new energy efficient homes                                                                                                                                                                | - 82                  | -633                     |
|                            | Provide tax credit for solar energy systems                                                                                                                                                                      | -9                    | -132                     |
| <b>Vehicles</b>            |                                                                                                                                                                                                                  |                       |                          |
|                            | Extend tax credit for electric and fuel cell vehicles and provide tax credits for highly fuel efficient hybrid vehicles                                                                                          | 0                     | -2078                    |
| <b>Clean Energy</b>        |                                                                                                                                                                                                                  |                       |                          |
|                            | Extend tax credit for electricity produced from wind and closed-loop biomass; provide credits for open-loop biomass facilities and coal-biomass cofiring; and provide credits for methane from certain landfills | -91                   | -976                     |
| <b>Industry</b>            |                                                                                                                                                                                                                  |                       |                          |
|                            | Provide 15-year recovery period for distributed power property                                                                                                                                                   | -1                    | -10                      |
| <b>TOTAL**</b>             |                                                                                                                                                                                                                  | <b>-201</b>           | <b>-4030</b>             |

\*\*Total may not add due to rounding.

### HOMES AND BUILDINGS

- ***Tax credit to consumers who purchase new energy efficient homes.*** To encourage the purchase of new energy efficient homes, consumers would receive a tax credit of \$1,000 for homes purchased from 2001-2003 that are 30 percent more energy efficient than the standard under the 1998 International Energy Conservation Code (IECC) and a credit of \$2,000 for homes purchased from 2001-2005 that are at least 50 percent more energy efficient than the IECC standard.
- ***Tax credit for energy efficient equipment in new and existing homes or buildings.*** This credit will encourage the purchase of electric heat pump water heaters, natural gas heat pumps and fuel cells. The credit would apply to both residential and commercial equipment. The credit



would be 20 percent of the cost of the investment, subject to a cap, for equipment purchased from 2001-2004.

- ***Tax credit for solar energy systems.*** A 15 percent tax credit will encourage the purchase by consumers and businesses of solar energy systems. The maximum credit would be \$2,000 for rooftop photovoltaic systems placed in service from 2001-2007 and \$1,000 for solar water heating systems placed in service from 2001-2005.

## VEHICLES

- ***Tax credits for highly efficient cars and light trucks.*** Cars and light trucks (including minivans, sport utilities, and pickups) currently account for 20 percent of greenhouse gas emissions. Tax credits for electric, fuel cell, and hybrid vehicles will help to move advanced technologies from the laboratory to the highway. These technologies can significantly reduce emissions of carbon dioxide, the most prevalent greenhouse gas.

--**Extend the current tax credit for electric vehicles and fuel cell vehicles.** Under current law, a 10 percent credit, up to \$4,000, is provided for the cost of qualified electric vehicles and fuel cell vehicles. The credit begins to phase down in 2002 and phases out in 2005. The President's proposal would extend the tax credit at its \$4,000 maximum level through 2006.

--**Tax credits for hybrid vehicles.** The credit -- available for all qualifying vehicles, including cars, minivans, sport utility vehicles, and pickup trucks -- would range from \$500 to \$3,000 for purchases of a qualified hybrid vehicle from 2003 through 2006, depending upon the vehicle's design performance.

## CLEAN ENERGY

- ***Tax credit for electricity produced from wind.*** Current law encourages the production of electricity from wind, which emits no greenhouse gases, through a tax credit of 1.5 cents per kilowatt hour (adjusted for inflation after 1992). The current tax credit covers facilities placed in service before January 1, 2002. The President proposes a 2.5-year extension of this tax credit.
- ***Tax credits for electricity produced from biomass.*** Biomass refers to trees, crops and agricultural wastes used to produce power, fuels or chemicals. This package of credits would:

-- **Extend current "closed-loop" biomass credit.** This proposal extends for 2.5 years the current 1.5 cent per kilowatt hour tax credit (adjusted for inflation after 1992), which covers facilities placed in service before January 1, 2002.

-- **Provide credits for "open loop" biomass facilities.** This proposal expands the definition of biomass eligible for the 1.5 cent tax credit to include certain forest-related

resources and agricultural and other sources for facilities placed in service from 2001 through 2005, and provides a 1.0 cent credit for electricity produced from 2001 through 2003 from facilities placed in service prior to July 1, 1999.

-- **Provide a credit for cofiring biomass and coal.** This proposal adds a 0.5 cent per kilowatt hour tax credit for electricity produced by cofiring biomass in coal plants from 2001 through 2005.

-- **Provide credit for methane from landfills.** This proposal adds a 1.5 cent per kilowatt hour credit for electricity produced from landfills not subject to EPA's 1996 New Source Performance Standards/Emissions Guidelines (NSPS/EG) and 1.0 cent per kilowatt hour for landfills subject to NSPS/EG. Qualified facilities would be facilities placed in service after December 31, 2000 and before January 1, 2006.

## **INDUSTRY**

***15-year recovery period for distributed power property.*** The development of distributed power technologies has made it possible to generate electricity locally at dispersed industrial, commercial, and residential locations. Such technologies can be more energy efficient and generate fewer greenhouse gases than conventional generation methods. This proposal would simplify and rationalize the current depreciation system by assigning a single 15-year recovery period to distributed power property.

Climate Change-Related Funding  
FY 2001 Budget  
(\$'s in millions)

|                                      | <u>FY 2000<br/>Enacted</u> | <u>FY 2001<br/>Proposed</u> | <u>Change</u> |
|--------------------------------------|----------------------------|-----------------------------|---------------|
| Climate Change Technology Initiative |                            |                             |               |
| – Spending                           | 1,099                      | 1,432                       | +333          |
| – Tax Incentives                     | *                          | *                           |               |
| Clean Energy Initiative              |                            |                             |               |
| – International 1/                   | 0                          | 100                         | +100          |
| – Bioenergy/Bioproducts              | 196                        | 289                         | + 93          |
| Global Change Research Program       | 1,701                      | 1,740                       | + 39          |
| Clean Air Partnership Fund           | 0                          | 85                          | + 85          |
| Weatherization & State Energy Grants | 169                        | 191                         | + 22          |

Notes:

\* Waiting for Treasury estimates.

1/ Only includes new initiative funding. Baseline is still being defined.

|      | <u>OO<br/>ENACTED</u> | <u>OO<br/>REQD.</u> | <u>DOMESTIC</u> |                | <u>INT'L</u>   | <u>TOTAL</u> |
|------|-----------------------|---------------------|-----------------|----------------|----------------|--------------|
| RV   | 67                    | 73                  | (72)79          | JEFFORDS<br>82 | 4              | 83           |
| WIND | 33                    | 45.6                | 46.5            |                | <del>5</del> 4 | 50.5         |
| GEO  | 24                    | 29.5                | 25              |                | 2              | 27           |

|          |          |
|----------|----------|
| AID      | 30       |
| COMMERCE | 4        |
| TDA      | 5        |
| EX-IM    | 15       |
|          | <hr/> 54 |

Double Counts with CCTI  
(\$' In millions)

FY 2001

Department of Energy

Solar and Renewable Energy

42

International Energy

(19)

Bioenergy

(23)

Energy Conservation

19

International Energy

(7)

Bioenergy

(12)

Department of Agriculture

Agricultural Research Service

Bioenergy

1.5

Forest Service

Bioenergy

6.5

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International Initiative

DOE

46

USAID

30

DOC

4

TDA

15

EX-IM

5

---

100

Bioenergy Initiative

DOE

35

USDA

30

---

65

IS/OENERA

## Climate Change Technology Initiative Funding

(Dollars in Millions)

336

| 1/7/2000 11:43                       | FY 1999  |            |                |              | FY 2000        |                  | FY 2001          |                  |                  |                |                  |
|--------------------------------------|----------|------------|----------------|--------------|----------------|------------------|------------------|------------------|------------------|----------------|------------------|
|                                      | FY97 App | FY98 App   | Request        | Omnibus      | Request        | Conf             | OMB Req          | Dir Revw         | Base Settle      | Initiatives    | Final            |
| Comm'l Bldgs Integ.                  |          |            | 2.544          |              | 6.325          |                  | 6.210            | 6.210            | 6.210            |                | 6.210            |
| Equip, Materials, Tools              |          |            | 43.014         |              | 60.800         |                  | 66.160           | 66.160           | 66.160           | 3.000          | 69.160           |
| Community Partnerships               |          |            | 18.801         |              | 35.400         |                  | 34.108           | 28.000           | 28.000           |                | 28.000           |
| Energy Star                          |          |            | 2.724          |              | 6.000          |                  | 5.964            | 5.500            | 5.500            | 1.000          | 6.500            |
| Mgmt & Planning                      |          |            | 13.571         |              | 15.318         |                  | 15.659           | 14.659           | 14.659           |                | 14.659           |
| Undistributed Reduction              |          |            |                |              |                |                  |                  | -0.270           | -0.270           |                | -0.270           |
| <b>FEMP</b>                          |          |            | <b>23.818</b>  |              | <b>31.868</b>  | <b>0.000</b>     | <b>29.468</b>    | <b>29.468</b>    | <b>29.468</b>    | <b>0.000</b>   | <b>29.468</b>    |
| Program Activities                   |          |            | 21.718         |              | 28.968         |                  | 25.968           | 25.968           | 25.968           |                | 25.968           |
| Program Direction                    |          |            | 2.100          |              | 2.900          |                  | 3.500            | 3.500            | 3.500            |                | 3.500            |
| <b>Industry</b>                      |          |            | <b>165.859</b> |              | <b>171.000</b> | <b>0.000</b>     | <b>172.526</b>   | <b>170.526</b>   | <b>170.526</b>   | <b>14.500</b>  | <b>185.026</b>   |
| Ind of the Future (specif)           |          |            | 57.456         |              | 74.000         |                  | 86.626           | 86.626           | 86.626           | 12.000         | 98.626           |
| Ind of the Future (xcut)             |          |            | 100.052        |              | 87.600         |                  | 74.600           | 74.600           | 74.600           | 2.500          | 77.100           |
| Mgmt & Planning                      |          |            | 8.351          |              | 9.400          |                  | 11.300           | 9.300            | 9.300            |                | 9.300            |
| <b>Transportation</b>                |          |            | <b>202.071</b> |              | <b>252.100</b> | <b>0.000</b>     | <b>260.370</b>   | <b>251.870</b>   | <b>251.870</b>   | <b>0.000</b>   | <b>251.870</b>   |
| Vehicle Tech R&D                     |          |            | 125.936        |              | 168.080        |                  | 167.220          | 167.220          | 167.220          |                | 167.220          |
| Fuels Utilization R&D                |          |            | 17.785         |              | 23.500         |                  | 25.150           | 25.150           | 25.150           |                | 25.150           |
| Technology Deployment                |          |            | 12.950         |              | 17.700 C=12.8  |                  | 25.000           | 17.000           | 17.000           |                | 17.000           |
| Materials Technologies               |          |            | 37.475         |              | 33.000 C=42.5  |                  | 33.000           | 33.000           | 33.000           |                | 33.000           |
| Mgmt & Planning                      |          |            | 7.925          |              | 9.820          |                  | 10.000           | 9.500            | 9.500            |                | 9.500            |
| <b>Policy &amp; Mgmt</b>             |          |            | <b>38.021</b>  |              | <b>46.666</b>  |                  | <b>50.377</b>    | <b>46.377</b>    | <b>46.377</b>    |                | <b>46.377</b>    |
| Outlays                              |          |            | 508.100        |              | 551.963        | 531.001          | 595.714          | 589.012          | 589.012          | 5.700          | 594.712          |
| <b>Non-CCTI (tracking only):</b>     |          |            |                |              |                |                  |                  |                  |                  |                |                  |
| (State Grants -- non-add)            | 150      | 155        | 191            | 166          | 191            | 168.500          | 191.340          | 176.000          | 191.000          |                | 191.000          |
| (Energy Conservation Total)          | 570      | 612        | 809            | 692          | 837.515        | 745.142          | 856.682          | 819.000          | 834.000          | 19.000         | 853.000          |
| (PODRA and transfers)                | -30      | -21        | -35            | -64          | -25            | -25.000          | 0.000            | 0.000            | 0.000            | 0.000          | 0.000            |
| (Energy Conservation Net)            | 540      | 591        | 774            | 628          | 813            | 720.142          | 856.682          | 819.000          | 834.000          | 19.000         | 853.000          |
| <b>Fossil Energy R&amp;D Account</b> | <b>0</b> | <b>0</b>   | <b>30</b>      | <b>24</b>    | <b>37</b>      | <b>51.000</b>    | <b>72.700</b>    | <b>47.470</b>    | <b>52.000</b>    | <b>52.000</b>  | <b>52.000</b>    |
| (Coal & Gas Utiliz -- non-add)       |          |            |                |              |                |                  |                  |                  |                  |                |                  |
| <b>Energy Information Administra</b> | <b>0</b> | <b>0</b>   | <b>3</b>       | <b>3</b>     | <b>3</b>       | <b>3.000</b>     | <b>2.500</b>     | <b>2.500</b>     | <b>2.500</b>     | <b>2.500</b>   | <b>2.500</b>     |
| <hr/>                                |          |            |                |              |                |                  |                  |                  |                  |                |                  |
| <b>DOE CCTI TOTAL</b>                |          | <b>729</b> | <b>1,059</b>   | <b>902</b>   | <b>1,122</b>   | <b>983.772</b>   | <b>1,214.709</b> | <b>1,097.970</b> | <b>1,104.200</b> | <b>115.500</b> | <b>1,165.200</b> |
| <b>EPA</b>                           |          | <b>90</b>  | <b>205</b>     | <b>109</b>   | <b>216</b>     | <b>103.000</b>   | <b>227.000</b>   | <b>227.000</b>   | <b>227.000</b>   |                | <b>227.000</b>   |
| <b>HUD</b>                           |          | <b>0</b>   | <b>10</b>      | <b>10</b>    | <b>10</b>      | <b>10.000</b>    | <b>15.000</b>    | <b>10.000</b>    | <b>10.000</b>    |                | <b>10.000</b>    |
| <b>USDA</b>                          |          | <b>0</b>   | <b>10</b>      | <b>0</b>     | <b>16</b>      | <b>0.000</b>     | <b>16.000</b>    | <b>13.000</b>    | <b>16.000</b>    | <b>8.000</b>   | <b>24.000</b>    |
| <b>DOC</b>                           |          | <b>0</b>   | <b>7</b>       | <b>0</b>     | <b>2</b>       | <b>1.780</b>     | <b>2.000</b>     | <b>2.000</b>     | <b>2.000</b>     |                | <b>2.000</b>     |
| <hr/>                                |          |            |                |              |                |                  |                  |                  |                  |                |                  |
| <b>CCTI TOTAL</b>                    |          | <b>819</b> | <b>1,291</b>   | <b>1,021</b> | <b>1,366</b>   | <b>1,098.552</b> | <b>1,474.709</b> | <b>1,349.970</b> | <b>1,359.200</b> | <b>123.500</b> | <b>1,428.200</b> |
| Increase over FY99                   |          |            | 472            | 202          | 348            | 78               | 454              | 329              | 336              | -897           | 497              |
| Relative to Previous Approp          |          |            | 58%            | 25%          | 0              | 8%               | 44%              | 32%              | 33%              | -88%           | 40%              |
| <hr/>                                |          |            |                |              |                |                  |                  |                  |                  |                |                  |
| Relative to FY00 Request             |          |            |                |              |                |                  |                  |                  |                  |                |                  |
| Dollars                              |          |            |                |              |                | -268             | 108              | -17              | -7               | -1,243         | 62               |
| Percentage                           |          |            |                |              |                | -20%             | 8%               | -1%              | -1%              | -91%           | 5%               |

The FY 2000 House Energy Conservation numbers have been adjusted to compensate for the House's proposed shifts of programs between Conservation and Fossil Energy, so that the numbers are comparable to FY99, the FY00 request, and FY00 Senate.

In FY 1999, the difference between "Conference" and "omnibus" represents what was gained in the "end game."

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## Climate Change Technology Initiative Funding

(Dollars in Millions)

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|                              | FY 1999  |          |         |         | FY 2000 |         | FY 2001 |          |             |             |         |
|------------------------------|----------|----------|---------|---------|---------|---------|---------|----------|-------------|-------------|---------|
|                              | FY97 App | FY98 App | Request | Omnibus | Request | Conf    | OMB Req | Dir Revw | Base Settle | Initiatives | Final   |
| Energy & Water Appropriation | 270      | 272      | 409     | 349     | 436     | 353     | 474     | 405      | 407         | 42          | 449     |
| Energy Supply Account        | 270      | 272      | 382     | 336     | 403     | 320     | 439     | 370      | 370         | 42          | 412     |
| Solar & Renewable Energy     | 270      | 272      | 372     | 335.521 | 398.155 | 315.130 | 434.167 | 365.000  | 365.000     | 42.000      | 407.000 |
| Initiative Plug              |          |          |         |         |         |         |         |          |             |             |         |
| Solar Buildings              |          |          |         | 3.556   | 5.500   | 2.000   | 5.500   | 5.500    | 5.500       | 0.000       | 5.500   |
| Tech Devel                   |          |          |         | 3.456   | 4.700   | 1.700   | 4.700   | 4.700    | 4.700       |             | 4.700   |
| Quality Assurance            |          |          |         | 0.100   | 0.300   | 0.300   | 0.300   | 0.300    | 0.300       |             | 0.300   |
| Precompet. Field Val.        |          |          |         | 0.100   | 0.500   |         | 0.500   | 0.500    | 0.500       |             | 0.500   |
| Photovoltaics                |          |          |         | 70.561  | 93.309  | 67.000  | 91.000  | 72.000   | 72.000      | 0.000       | 72.000  |
| Fundamental Research         |          |          |         | 10.761  | 20.309  | 15.309  | 24.309  | 20.309   | 20.309      |             | 20.309  |
| Adv. Materials & Dev         |          |          |         | 25.836  | 27.000  | 27.000  | 27.000  | 27.000   | 27.000      |             | 27.000  |
| Collectors & Systems         |          |          |         | 33.964  | 46.000  | 24.691  | 39.691  | 24.691   | 24.691      |             | 24.691  |
| Concentrating Solar          |          |          |         | 16.791  | 18.850  | 15.400  | 15.000  | 15.000   | 15.000      | 0.000       | 15.000  |
| Distributed Power Sys        |          |          |         | 5.300   | 6.700   | 5.000   | 3.000   | 4.300    | 4.300       |             | 4.300   |
| Dispatchable Power           |          |          |         | 5.970   | 5.340   | 5.000   | 5.200   | 5.200    | 5.200       |             | 5.200   |
| Adv. Compon & Sys            |          |          |         | 4.781   | 5.960   | 2.900   | 6.800   | 5.500    | 5.500       |             | 5.500   |
| Alliances & Mkt Aware        |          |          |         | 0.740   | 0.850   | 2.500   | 0.000   | 0.000    | 0.000       |             | 0.000   |
| Biomass/Biofuels             |          |          |         | 72.052  | 92.391  | 72.000  | 88.941  | 84.441   | 84.441      | 23.000      | 107.441 |
| Power Systems                |          |          |         | 30.816  | 38.950  | 32.500  | 37.000  | 37.000   | 37.000      | 14.000      | 51.000  |
| Transportation               |          |          |         | 41.236  | 53.441  | 39.500  | 51.941  | 47.441   | 47.441      | 9.000       | 56.441  |
| Wind                         |          |          |         | 34.076  | 45.600  | 33.000  | 52.000  | 46.500   | 46.500      | 0.000       | 46.500  |
| Applied Research             |          |          |         | 10.700  | 13.500  | 13.500  | 15.500  | 15.500   | 15.500      |             | 15.500  |
| Turbine Research             |          |          |         | 15.815  | 20.200  |         | 15.000  | 15.000   | 15.000      |             | 15.000  |
| Coop Res & Testing           |          |          |         | 7.561   | 11.900  | 19.500  | 21.500  | 16.000   | 16.000      |             | 16.000  |
| REPI                         |          |          |         | 4.000   | 1.500   | 1.500   | 4.000   | 4.000    | 4.000       |             | 4.000   |
| Solar Prog Support           |          |          |         | 0.000   | 10.000  | 5.000   | 12.500  | 5.000    | 5.000       | 0.000       | 5.000   |
| Elec. Restructuring          |          |          |         |         | 2.000   | 1.000   | 2.000   | 1.000    | 1.000       |             | 1.000   |
| Feas Studies for comp        |          |          |         |         | 1.000   | 1.000   | 1.000   | 0.000    | 0.000       |             | 0.000   |
| Compet Solic Projects        |          |          |         |         | 7.000   | 3.000   | 9.500   | 4.000    | 4.000       |             | 4.000   |
| International Solar          |          |          |         | 6.272   | 6.000   | 4.000   | 11.000  | 7.000    | 7.000       | 19.000      | 26.000  |
| NREL                         |          |          |         | 3.900   | 1.100   | 1.100   | 7.450   | 1.900    | 1.900       |             | 1.900   |
| Geothermal                   |          |          |         | 28.150  | 29.500  | 24.000  | 30.855  | 25.000   | 25.000      | 0.000       | 25.000  |
| Reservoir Technology         |          |          |         | 5.433   | 8.000   |         | 7.000   | 6.000    | 6.000       |             | 6.000   |
| Exploration R&D              |          |          |         | 5.433   | 7.000   | 6.000   | 6.000   | 6.000    | 6.000       |             | 6.000   |
| Drilling Tech R&D            |          |          |         | 4.934   | 7.500   | 5.500   | 8.000   | 5.500    | 5.500       |             | 5.500   |
| Energy Conversion            |          |          |         | 5.930   | 7.000   | 12.500  | 7.500   | 7.500    | 7.500       |             | 7.500   |
| Low/Med Temp Demos           |          |          |         |         |         |         | 2.355   | 0.000    | 0.000       |             | 0.000   |
| Hydrogen R&D                 |          |          |         | 21.976  | 28.000  | 25.000  | 25.000  | 25.000   | 25.000      |             | 25.000  |
| Hydropower                   |          |          |         | 3.210   | 7.000   | 5.000   | 6.000   | 5.000    | 5.000       |             | 5.000   |
| Renewable Indian Energy      |          |          |         | 4.779   | 0.000   | 4.000   | 4.000   | 4.000    | 4.000       |             | 4.000   |
| Elec. Energy Sys & Storage   |          |          |         | 40.896  | 41.000  | 38.410  | 55.600  | 41.500   | 41.500      | 0.000       | 41.500  |
| Elec. Grid Reliability       |          |          |         | 4.251   | 4.000   | 3.000   | 13.000  | 3.000    | 3.000       |             | 3.000   |
| Hi-Temp Supercond            |          |          |         | 32.100  | 31.000  | 31.910  | 35.000  | 35.000   | 35.000      |             | 35.000  |
| Energy Storage               |          |          |         | 4.445   | 6.000   | 3.500   | 7.100   | 3.500    | 3.500       |             | 3.500   |
| Climate Challenge            |          |          |         | 0.100   | 0.000   |         | 0.500   | 0.000    | 0.000       |             | 0.000   |
| Fed Bldg/Remote Power        |          |          |         | 4.000   |         |         |         |          |             |             |         |
| Program Direction            |          |          |         | 18.100  | 19.171  | 17.720  | 20.321  | 18.159   | 18.159      |             | 18.159  |
| Dept'l Energy Mgmt           |          |          |         |         |         |         | 5.000   | 5.000    | 5.000       |             | 5.000   |
| SBIR Set-aside               |          |          |         | 3.682   |         |         |         |          |             |             |         |
| Adjustments                  |          |          |         | -0.480  | -0.766  |         |         |          |             |             |         |
|                              |          |          |         |         |         | -83.0   |         | -33.2    | -33.2       |             | 8.8     |
| Outlays                      |          |          |         |         | 354     | 302.731 | 372     | 341      | 341         | 19          | 360     |
| Nuclear Energy               | 0        | 0        | 10      | 0       | 5       | 5.000   | 5.000   | 5.000    | 5.000       |             | 5.000   |
| Science Account              |          | 0        | 27      | 13.5    | 33      | 33.000  | 35.000  | 35.000   | 36.700      | 0.000       | 36.700  |
| Biological & Envir Research  |          |          |         | 8.0     | 20      | 13.000  | 15.000  | 15.000   | 16.700      |             | 16.700  |
| Basic Energy Sciences        |          |          |         | 5.5     | 13      | 20.000  | 20.000  | 20.000   | 20.000      |             | 20.000  |
| Energy Research total        |          | 0        | 27      |         |         |         |         |          |             |             |         |
| Interior Appropriation       | 457      | 650      | 553     | 686.315 | 630.642 |         | 740.542 | 692.970  | 697.500     | 73.500      | 716.500 |
|                              |          |          |         | 525.701 | 576.642 |         | 666.000 | 643.000  | 643.000     |             | 643.000 |
| Energy Conservation R&D      | 420      | 457      | 617     | 526.390 | 646.515 | 576.642 | 665.342 | 643.000  | 643.000     | 19.000      | 662.000 |
| Buildings                    |          |          |         | 96.621  | 144.881 | 0.000   | 152.601 | 144.759  | 144.759     | 4.500       | 149.259 |
| Roadmaps & comp R&D          |          |          |         | 6.385   | 7.500   |         | 11.000  | 11.000   | 11.000      | 0.500       | 11.500  |
| Resid Bldgs Integration      |          |          |         | 9.582   | 13.538  |         | 13.500  | 13.500   | 13.500      |             | 13.500  |



## Climate Change Technology Initiative Funding

(Dollars in Millions)

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|                                         |            |            | FY 1999    |            | FY 2000    |            | FY 2001    |            |             |
|-----------------------------------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|
|                                         | FY97 App   | FY98 App   | Request    | Omnibus    | Request    | Conf       | OMB Req    | Dir Revw   | Base Settle |
| <b>Energy &amp; Water Appropriation</b> | <b>270</b> | <b>272</b> | <b>409</b> | <b>349</b> | <b>436</b> | <b>353</b> | <b>474</b> | <b>405</b> | <b>407</b>  |
| <b>Energy Supply Account</b>            | <b>270</b> | <b>272</b> | <b>382</b> | <b>336</b> | <b>403</b> | <b>320</b> | <b>439</b> | <b>370</b> | <b>370</b>  |
| Solar & Renewable Energy                | 270        | 272        | 372        | 335.521    | 398.155    | 315.130    | 434.167    | 365.000    | 365.000     |
| Initiative Plug                         |            |            |            |            |            |            |            |            |             |
| Solar Buildings                         |            |            | 3.556      |            | 5.500      | 2.000      | 5.500      | 5.500      | 5.500       |
| Tech Devel                              |            |            | 3.456      |            | 4.700      | 1.700      | 4.700      | 4.700      | 4.700       |
| Quality Assurance                       |            |            | 0.100      |            | 0.300      | 0.300      | 0.300      | 0.300      | 0.300       |
| Precompet. Field Val.                   |            |            | 0.100      |            | 0.500      |            | 0.500      | 0.500      | 0.500       |
| Photovoltaics                           |            |            | 70.561     |            | 93.309     | 67.000     | 91.000     | 72.000     | 72.000      |
| Fundamental Research                    |            |            | 10.761     |            | 20.309     | 15.309     | 24.309     | 20.309     | 20.309      |
| Adv. Materials & Dev                    |            |            | 25.836     |            | 27.000     | 27.000     | 27.000     | 27.000     | 27.000      |
| Collectors & Systems                    |            |            | 33.964     |            | 46.000     | 24.691     | 39.691     | 24.691     | 24.691      |
| Concentrating Solar                     |            |            | 16.791     |            | 18.850     | 15.400     | 15.000     | 15.000     | 15.000      |
| Distributed Power Sys                   |            |            | 5.300      |            | 6.700      | 5.000      | 3.000      | 4.300      | 4.300       |
| Dispatchable Power                      |            |            | 5.970      |            | 5.340      | 5.000      | 5.200      | 5.200      | 5.200       |
| Adv. Compon & Sys                       |            |            | 4.781      |            | 5.960      | 2.900      | 6.800      | 5.500      | 5.500       |
| Alliances & Mkt Aware                   |            |            | 0.740      |            | 0.850      | 2.500      | 0.000      | 0.000      | 0.000       |
| Biomass/Biofuels                        |            |            | 72.052     |            | 92.391     | 72.000     | 88.941     | 84.441     | 84.441      |
| Power Systems                           |            |            | 30.816     |            | 38.950     | 32.500     | 37.000     | 37.000     | 37.000      |
| Transportation                          |            |            | 41.236     |            | 53.441     | 39.500     | 51.941     | 47.441     | 47.441      |
| Wind                                    |            |            | 34.076     |            | 45.600     | 33.000     | 52.000     | 46.500     | 46.500      |
| Applied Research                        |            |            | 10.700     |            | 13.500     | 13.500     | 15.500     | 15.500     | 15.500      |
| Turbine Research                        |            |            | 15.815     |            | 20.200     |            | 15.000     | 15.000     | 15.000      |
| Coop Res & Testing                      |            |            | 7.561      |            | 11.900     | 19.500     | 21.500     | 16.000     | 16.000      |
| REPI                                    |            |            | 4.000      |            | 1.500      | 1.500      | 4.000      | 4.000      | 4.000       |
| Solar Prog Support                      |            |            | 0.000      |            | 10.000     | 5.000      | 12.500     | 5.000      | 5.000       |
| Elec. Restructuring                     |            |            |            |            | 2.000      | 1.000      | 2.000      | 1.000      | 1.000       |
| Feas Studies for comp                   |            |            |            |            | 1.000      | 1.000      | 1.000      | 0.000      | 0.000       |
| Compet Solic Projects                   |            |            |            |            | 7.000      | 3.000      | 9.500      | 4.000      | 4.000       |
| International Solar                     |            |            | 6.272      |            | 6.000      | 4.000      | 11.000     | 7.000      | 7.000       |
| NREL                                    |            |            | 3.900      |            | 1.100      | 1.100      | 7.450      | 1.900      | 1.900       |
| Geothermal                              |            |            | 28.150     |            | 29.500     | 24.000     | 30.855     | 25.000     | 25.000      |
| Reservoir Technology                    |            |            | 5.433      |            | 8.000      |            | 7.000      | 6.000      | 6.000       |
| Exploration R&D                         |            |            | 5.433      |            | 7.000      | 6.000      | 6.000      | 6.000      | 6.000       |
| Drilling Tech R&D                       |            |            | 4.934      |            | 7.500      | 5.500      | 8.000      | 5.500      | 5.500       |

(Dollars in Millions)

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FY 2000

FY97 App

FY98 App

Request Omnibus

Request

Conf

OMB Req

Dir Revw

## Base Settle

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## Climate Change Technology Initiative Funding

(Dollars in Millions)

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| 1/7/2000 14:22                       |          | FY 1999  |         |         |               | FY 2000 |           | FY 2001   |             |  |
|--------------------------------------|----------|----------|---------|---------|---------------|---------|-----------|-----------|-------------|--|
|                                      | FY97 App | FY98 App | Request | Omnibus | Request       | Conf    | OMB Req   | Dir Revw  | Base Settle |  |
| <b>FEMP</b>                          |          |          | 23,818  |         | 31,868        | 0,000   | 29,468    | 29,468    | 29,468      |  |
| Program Activities                   |          |          | 21,718  |         | 28,968        |         | 25,968    | 25,968    | 25,968      |  |
| Program Direction                    |          |          | 2,100   |         | 2,900         |         | 3,500     | 3,500     | 3,500       |  |
| <b>Industry</b>                      |          |          | 165,859 |         | 171,000       | 0,000   | 172,526   | 170,526   | 170,526     |  |
| Ind of the Future (specif)           |          |          | 57,456  |         | 74,000        |         | 86,626    | 86,626    | 86,626      |  |
| Ind of the Future (xcut)             |          |          | 100,052 |         | 87,600        |         | 74,600    | 74,600    | 74,600      |  |
| Mgmt & Planning                      |          |          | 8,351   |         | 9,400         |         | 11,300    | 9,300     | 9,300       |  |
| <b>Transportation</b>                |          |          | 202,071 |         | 252,100       | 0,000   | 260,370   | 251,870   | 251,870     |  |
| Vehicle Tech R&D                     |          |          | 125,936 |         | 168,080       |         | 167,220   | 167,220   | 167,220     |  |
| Fuels Utilization R&D                |          |          | 17,785  |         | 23,500        |         | 25,150    | 25,150    | 25,150      |  |
| Technology Deployment                |          |          | 12,950  |         | 17,700 C=12.8 |         | 25,000    | 17,000    | 17,000      |  |
| Materials Technologies               |          |          | 37,475  |         | 33,000 C=42.5 |         | 33,000    | 33,000    | 33,000      |  |
| Mgmt & Planning                      |          |          | 7,925   |         | 9,820         |         | 10,000    | 9,500     | 9,500       |  |
| <b>Policy &amp; Mgmt</b>             |          |          | 38,021  |         | 46,666        |         | 50,377    | 46,377    | 46,377      |  |
| Outlays                              |          |          | 508,100 |         | 551,963       | 531,001 | 595,714   | 589,012   | 589,012     |  |
| <b>Non-CCTI (tracking only):</b>     |          |          |         |         |               |         |           |           |             |  |
| (State Grants -- non-add)            | 150      | 155      | 191     | 166     | 191           | 168,500 | 191,340   | 176,000   | 191,000     |  |
| (Energy Conservation Total)          | 570      | 612      | 809     | 692     | 837,515       | 745,142 | 856,682   | 819,000   | 834,000     |  |
| (PODRA and transfers)                | -30      | -21      | -35     | -64     | -25           | -25,000 | 0,000     | 0,000     | 0,000       |  |
| (Energy Conservation Net)            | 540      | 591      | 774     | 628     | 813           | 720,142 | 856,682   | 819,000   | 834,000     |  |
| <b>Fossil Energy R&amp;D Account</b> | 0        | 0        | 30      | 24      | 37            | 51,000  | 72,700    | 47,470    | 52,000      |  |
| (Coal & Gas Utiliz -- non-add)       |          |          |         |         |               |         |           |           |             |  |
| <b>Energy Information Administr</b>  | 0        | 0        | 3       | 3       | 3             | 3,000   | 2,500     | 2,500     | 2,500       |  |
| <b>DOE CCTI TOTAL</b>                |          | 729      | 1,059   | 902     | 1,122         | 983,772 | 1,214,709 | 1,097,970 | 1,104,200   |  |
| <b>EPA</b>                           |          | 90       | 205     | 109     | 216           | 103,000 | 227,000   | 227,000   | 227,000     |  |

## Climate Change Technology Initiative Funding

(Dollars in Millions)

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|                   | FY97 App | FY98 App   | FY 1999      |              | FY 2000      |                  | FY 2001          |                  |                  |
|-------------------|----------|------------|--------------|--------------|--------------|------------------|------------------|------------------|------------------|
|                   |          |            | Request      | Omnibus      | Request      | Conf             | OMB Req          | Dir Revw         | Base Settle      |
| <b>HUD</b>        |          | <b>0</b>   | <b>10</b>    | <b>10</b>    | <b>10</b>    | <b>10.000</b>    | <b>15.000</b>    | <b>10.000</b>    | <b>10.000</b>    |
| <b>USDA</b>       |          | <b>0</b>   | <b>10</b>    | <b>0</b>     | <b>16</b>    | <b>0.000</b>     | <b>16.000</b>    | <b>13.000</b>    | <b>16.000</b>    |
| <b>DOC</b>        |          | <b>0</b>   | <b>7</b>     | <b>0</b>     | <b>2</b>     | <b>1.780</b>     | <b>2.000</b>     | <b>2.000</b>     | <b>2.000</b>     |
| <b>CCTI TOTAL</b> |          | <b>819</b> | <b>1,291</b> | <b>1,021</b> | <b>1,366</b> | <b>1,098.552</b> | <b>1,474.709</b> | <b>1,349.970</b> | <b>1,359.200</b> |

## Climate Change Technology Initiative Funding

(Dollars in Millions)

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|                                         | 1/7/2000 11:43 |            | FY 1999    |                | FY 2000        |                | FY 2001        |                |                |               |                |
|-----------------------------------------|----------------|------------|------------|----------------|----------------|----------------|----------------|----------------|----------------|---------------|----------------|
|                                         | FY97 App       | FY98 App   | Request    | Omnibus        | Request        | Conf           | OMB Req        | Dir Revw       | Base Settle    | Initiatives   | Final          |
| <b>Energy &amp; Water Appropriation</b> | <b>270</b>     | <b>272</b> | <b>409</b> | <b>349</b>     | <b>436</b>     | <b>353</b>     | <b>474</b>     | <b>405</b>     | <b>407</b>     | <b>42</b>     | <b>449</b>     |
| <b>Energy Supply Account</b>            | <b>270</b>     | <b>272</b> | <b>382</b> | <b>336</b>     | <b>403</b>     | <b>320</b>     | <b>439</b>     | <b>370</b>     | <b>370</b>     | <b>42</b>     | <b>412</b>     |
| Solar & Renewable Energy                | 270            | 272        | 372        | 335.521        | 398.155        | 315.130        | 434.167        | 365.000        | 365.000        | 42.000        | 407.000        |
| Initiative Plug                         |                |            |            |                |                |                |                |                |                |               |                |
| Solar Buildings                         |                |            |            | 3.556          | 5.500          | 2.000          | 5.500          | 5.500          | 5.500          | 0.000         | 5.500          |
| Tech Devel                              |                |            |            | 3.456          | 4.700          | 1.700          | 4.700          | 4.700          | 4.700          |               | 4.700          |
| Quality Assurance                       |                |            |            | 0.100          | 0.300          | 0.300          | 0.300          | 0.300          | 0.300          |               | 0.300          |
| Precompet. Field Val.                   |                |            |            | 0.100          | 0.500          |                | 0.500          | 0.500          | 0.500          |               | 0.500          |
| Photovoltaics                           |                |            |            | 70.561         | 93.309         | 67.000         | 91.000         | 72.000         | 72.000         | 0.000         | 72.000         |
| Fundamental Research                    |                |            |            | 10.761         | 20.309         | 15.309         | 24.309         | 20.309         | 20.309         |               | 20.309         |
| Adv. Materials & Dev                    |                |            |            | 25.836         | 27.000         | 27.000         | 27.000         | 27.000         | 27.000         |               | 27.000         |
| Collectors & Systems                    |                |            |            | 33.964         | 46.000         | 24.691         | 39.691         | 24.691         | 24.691         |               | 24.691         |
| Concentrating Solar                     |                |            |            | 16.791         | 18.850         | 15.400         | 15.000         | 15.000         | 15.000         | 0.000         | 15.000         |
| Distributed Power Sys                   |                |            |            | 5.300          | 6.700          | 5.000          | 3.000          | 4.300          | 4.300          |               | 4.300          |
| Dispatchable Power                      |                |            |            | 5.970          | 5.340          | 5.000          | 5.200          | 5.200          | 5.200          |               | 5.200          |
| Adv. Compon & Sys                       |                |            |            | 4.781          | 5.960          | 2.900          | 6.800          | 5.500          | 5.500          |               | 5.500          |
| Alliances & Mkt Aware                   |                |            |            | 0.740          | 0.850          | 2.500          | 0.000          | 0.000          | 0.000          |               | 0.000          |
| Biomass/Biofuels                        |                |            |            | 72.052         | 92.391         | 72.000         | 88.941         | 84.441         | 84.441         | 23.000        | 107.441        |
| Power Systems                           |                |            |            | 30.816         | 38.950         | 32.500         | 37.000         | 37.000         | 37.000         | 14.000        | 51.000         |
| Transportation                          |                |            |            | 41.236         | 53.441         | 39.500         | 51.941         | 47.441         | 47.441         | 9.000         | 56.441         |
| Wind                                    |                |            |            | 34.076         | 45.600         | 33.000         | 52.000         | 46.500         | 46.500         | 0.000         | 46.500         |
| Applied Research                        |                |            |            | 10.700         | 13.500         | 13.500         | 15.500         | 15.500         | 15.500         |               | 15.500         |
| Turbine Research                        |                |            |            | 15.815         | 20.200         |                | 15.000         | 15.000         | 15.000         |               | 15.000         |
| Coop Res & Testing                      |                |            |            | 7.561          | 11.900         | 19.500         | 21.500         | 16.000         | 16.000         |               | 16.000         |
| REPI                                    |                |            |            | 4.000          | 1.500          | 1.500          | 4.000          | 4.000          | 4.000          |               | 4.000          |
| Solar Prog Support                      |                |            |            | 0.000          | 10.000         | 5.000          | 12.500         | 5.000          | 5.000          | 0.000         | 5.000          |
| Elec. Restructuring                     |                |            |            |                | 2.000          | 1.000          | 2.000          | 1.000          | 1.000          |               | 1.000          |
| Feas Studies for comp                   |                |            |            |                | 1.000          | 1.000          | 1.000          | 0.000          | 0.000          |               | 0.000          |
| Compet Solic Projects                   |                |            |            |                | 7.000          | 3.000          | 9.500          | 4.000          | 4.000          |               | 4.000          |
| International Solar                     |                |            |            | 6.272          | 6.000          | 4.000          | 11.000         | 7.000          | 7.000          | 19.000        | 26.000         |
| NREL                                    |                |            |            | 3.900          | 1.100          | 1.100          | 7.450          | 1.900          | 1.900          |               | 1.900          |
| Geothermal                              |                |            |            | 28.150         | 29.500         | 24.000         | 30.855         | 25.000         | 25.000         | 0.000         | 25.000         |
| Reservoir Technology                    |                |            |            | 5.433          | 8.000          |                | 7.000          | 6.000          | 6.000          |               | 6.000          |
| Exploration R&D                         |                |            |            | 5.433          | 7.000          | 6.000          | 6.000          | 6.000          | 6.000          |               | 6.000          |
| Drilling Tech R&D                       |                |            |            | 4.934          | 7.500          | 5.500          | 8.000          | 5.500          | 5.500          |               | 5.500          |
| Energy Conversion                       |                |            |            | 5.930          | 7.000          | 12.500         | 7.500          | 7.500          | 7.500          |               | 7.500          |
| Low/Med Temp Demos                      |                |            |            |                | 2.355          |                | 2.355          | 0.000          | 0.000          |               | 0.000          |
| Hydrogen R&D                            |                |            |            | 21.976         | 28.000         | 25.000         | 25.000         | 25.000         | 25.000         |               | 25.000         |
| Hydropower                              |                |            |            | 3.210          | 7.000          | 5.000          | 6.000          | 5.000          | 5.000          |               | 5.000          |
| Renewable Indian Energy                 |                |            |            | 4.779          | 0.000          | 4.000          | 4.000          | 4.000          | 4.000          |               | 4.000          |
| Elec. Energy Sys & Storage              |                |            |            | 40.896         | 41.000         | 38.410         | 55.600         | 41.500         | 41.500         | 0.000         | 41.500         |
| Elec. Grid Reliability                  |                |            |            | 4.251          | 4.000          | 3.000          | 13.000         | 3.000          | 3.000          |               | 3.000          |
| Hi-Temp Supercond                       |                |            |            | 32.100         | 31.000         | 31.910         | 35.000         | 35.000         | 35.000         |               | 35.000         |
| Energy Storage                          |                |            |            | 4.445          | 6.000          | 3.500          | 7.100          | 3.500          | 3.500          |               | 3.500          |
| Climate Challenge                       |                |            |            | 0.100          | 0.000          |                | 0.500          | 0.000          | 0.000          |               | 0.000          |
| Fed Bldg/Remote Power                   |                |            |            | 4.000          |                |                |                |                |                |               |                |
| Program Direction                       |                |            |            | 18.100         | 19.171         | 17.720         | 20.321         | 18.159         | 18.159         |               | 18.159         |
| Dept'l Energy Mgmt                      |                |            |            |                |                |                | 5.000          | 5.000          | 5.000          |               | 5.000          |
| SBIR Set-aside                          |                |            |            | 3.682          |                |                |                |                |                |               |                |
| Adjustments                             |                |            |            | -0.480         | -0.766         |                |                |                |                |               |                |
|                                         |                |            |            |                |                | -83.0          |                | -33.2          | -33.2          |               | 8.8            |
| Outlays                                 |                |            |            |                | 354            | 302.731        | 372            | 341            | 341            | 19            | 360            |
| Nuclear Energy                          | 0              | 0          | 10         | 0              | 5              | 5.000          | 5.000          | 5.000          | 5.000          |               | 5.000          |
| <b>Science Account</b>                  |                | <b>0</b>   | <b>27</b>  | <b>13.5</b>    | <b>33</b>      | <b>33.000</b>  | <b>35.000</b>  | <b>35.000</b>  | <b>36.700</b>  | <b>0.000</b>  | <b>36.700</b>  |
| Biological & Envir Research             |                |            |            | 8.0            | 20             | 13.000         | 15.000         | 15.000         | 16.700         |               | 16.700         |
| Basic Energy Sciences                   |                |            |            | 5.5            | 13             | 20.000         | 20.000         | 20.000         | 20.000         |               | 20.000         |
| Energy Research total                   |                | 0          | 27         |                |                |                |                |                |                |               |                |
| <b>Interior Appropriation</b>           |                | <b>457</b> | <b>650</b> | <b>553</b>     | <b>686.315</b> | <b>630.642</b> | <b>740.542</b> | <b>692.970</b> | <b>697.500</b> | <b>73.500</b> | <b>716.500</b> |
|                                         |                |            |            | <b>525.701</b> |                | <b>576.642</b> | <b>666.000</b> | <b>643.000</b> | <b>643.000</b> |               | <b>643.000</b> |
| <b>Energy Conservation R&amp;D</b>      | <b>420</b>     | <b>457</b> | <b>617</b> | <b>526.390</b> | <b>646.515</b> | <b>576.642</b> | <b>665.342</b> | <b>643.000</b> | <b>643.000</b> | <b>19.000</b> | <b>662.000</b> |
| Buildings                               |                |            |            | 96.621         | 144.881        | 0.000          | 152.601        | 144.759        | 144.759        | 4.500         | 149.259        |
| Roadmaps & comp R&D                     |                |            |            | 6.385          | 7.500          |                | 11.000         | 11.000         | 11.000         | 0.500         | 11.500         |
| Resid Bldgs Integration                 |                |            |            | 9.582          | 13.538         |                | 13.500         | 13.500         | 13.500         |               | 13.500         |

## Climate Change Technology Initiative Funding

(Dollars in Millions)

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| 1/7/2000 11:43                | FY 1999  |          |         |         | FY 2000 |           | FY 2001   |           |             |             |           |
|-------------------------------|----------|----------|---------|---------|---------|-----------|-----------|-----------|-------------|-------------|-----------|
|                               | FY97 App | FY98 App | Request | Omnibus | Request | Conf      | OMB Req   | Dir Revw  | Base Settle | Initiatives | Final     |
| Comm'l Bldgs Integ.           |          |          | 2.544   | 6.325   | 6.325   |           | 6.210     | 6.210     | 6.210       |             | 6.210     |
| Equip, Materials, Tools       |          |          | 43.014  | 60.800  | 60.800  |           | 66.160    | 66.160    | 66.160      | 3.000       | 69.160    |
| Community Partnerships        |          |          | 18.801  | 35.400  | 35.400  |           | 34.108    | 28.000    | 28.000      |             | 28.000    |
| Energy Star                   |          |          | 2.724   | 6.000   | 6.000   |           | 5.964     | 5.500     | 5.500       | 1.000       | 6.500     |
| Mgmt & Planning               |          |          | 13.571  | 15.318  | 15.318  |           | 15.659    | 14.659    | 14.659      |             | 14.659    |
| Undistributed Reduction       |          |          |         |         |         |           |           | -0.270    | -0.270      |             | -0.270    |
| FEMP                          |          |          | 23.818  | 31.868  | 31.868  | 0.000     | 29.468    | 29.468    | 29.468      | 0.000       | 29.468    |
| Program Activities            |          |          | 21.718  | 28.968  | 28.968  |           | 25.968    | 25.968    | 25.968      |             | 25.968    |
| Program Direction             |          |          | 2.100   | 2.900   | 2.900   |           | 3.500     | 3.500     | 3.500       |             | 3.500     |
| Industry                      |          |          | 165.859 | 171.000 | 171.000 | 0.000     | 172.526   | 170.526   | 170.526     | 14.500      | 185.026   |
| Ind of the Future (specif)    |          |          | 57.456  | 74.000  | 74.000  |           | 86.626    | 86.626    | 86.626      | 12.000      | 98.626    |
| Ind of the Future (xcut)      |          |          | 100.052 | 87.600  | 87.600  |           | 74.600    | 74.600    | 74.600      | 2.500       | 77.100    |
| Mgmt & Planning               |          |          | 8.351   | 9.400   | 9.400   |           | 11.300    | 9.300     | 9.300       |             | 9.300     |
| Transportation                |          |          | 202.071 | 252.100 | 252.100 | 0.000     | 260.370   | 251.870   | 251.870     | 0.000       | 251.870   |
| Vehicle Tech R&D              |          |          | 125.936 | 168.080 | 168.080 |           | 167.220   | 167.220   | 167.220     |             | 167.220   |
| Fuels Utilization R&D         |          |          | 17.785  | 23.500  | 23.500  |           | 25.150    | 25.150    | 25.150      |             | 25.150    |
| Technology Deployment         |          |          | 12.950  | 17.700  | 17.700  | C=12.8    | 25.000    | 17.000    | 17.000      |             | 17.000    |
| Materials Technologies        |          |          | 37.475  | 33.000  | 33.000  | C=42.5    | 33.000    | 33.000    | 33.000      |             | 33.000    |
| Mgmt & Planning               |          |          | 7.925   | 9.820   | 9.820   |           | 10.000    | 9.500     | 9.500       |             | 9.500     |
| Policy & Mgmt                 |          |          | 38.021  | 46.666  | 46.666  |           | 50.377    | 46.377    | 46.377      |             | 46.377    |
| Outlays                       |          |          | 508.100 | 551.963 | 551.963 |           | 595.714   | 589.012   | 589.012     | 5.700       | 594.712   |
| Non-CCTI (tracking only):     |          |          |         |         |         |           |           |           |             |             |           |
| (State Grants – non-add)      | 150      | 155      | 191     | 166     | 191     | 168.500   | 191.340   | 176.000   | 191.000     |             | 191.000   |
| (Energy Conservation Total)   | 570      | 612      | 809     | 692     | 837.515 | 745.142   | 856.682   | 819.000   | 834.000     | 19.000      | 853.000   |
| (PODRA and transfers)         | -30      | -21      | -35     | -64     | -25     | -25.000   | 0.000     | 0.000     | 0.000       | 0.000       | 0.000     |
| (Energy Conservation Net)     | 540      | 591      | 774     | 628     | 813     | 720.142   | 856.682   | 819.000   | 834.000     | 19.000      | 853.000   |
| Fossil Energy R&D Account     | 0        | 0        | 30      | 24      | 37      | 51.000    | 72.700    | 47.470    | 52.000      | 52.000      | 52.000    |
| (Coal & Gas Utiliz – non-add) |          |          |         |         |         |           |           |           |             |             |           |
| Energy Information Administra | 0        | 0        | 3       | 3       | 3       | 3.000     | 2.500     | 2.500     | 2.500       | 2.500       | 2.500     |
| <hr/>                         |          |          |         |         |         |           |           |           |             |             |           |
| DOE CCTI TOTAL                |          | 729      | 1,059   | 902     | 1,122   | 983.772   | 1,214.709 | 1,097.970 | 1,104.200   | 115.500     | 1,165.200 |
| EPA                           |          | 90       | 205     | 109     | 216     | 103.000   | 227.000   | 227.000   | 227.000     |             | 227.000   |
| HUD                           |          | 0        | 10      | 10      | 10      | 10.000    | 15.000    | 10.000    | 10.000      |             | 10.000    |
| USDA                          |          | 0        | 10      | 0       | 16      | 0.000     | 16.000    | 13.000    | 16.000      | 8.000       | 24.000    |
| DOC                           |          | 0        | 7       | 0       | 2       | 1.780     | 2.000     | 2.000     | 2.000       |             | 2.000     |
| <hr/>                         |          |          |         |         |         |           |           |           |             |             |           |
| CCTI TOTAL                    |          | 819      | 1,291   | 1,021   | 1,366   | 1,098.552 | 1,474.709 | 1,349.970 | 1,359.200   | 123.500     | 1,428.200 |
| Increase over FY99            |          |          | 472     | 202     | 346     | 78        | 454       | 329       | 338         | -897        | 407       |
| Relative to Previous Approp   |          |          | 58%     | 25%     | 0       | 8%        | 44%       | 32%       | 33%         | -88%        | 40%       |
| <hr/>                         |          |          |         |         |         |           |           |           |             |             |           |
| Relative to FY00 Request      |          |          |         |         |         |           |           |           |             |             |           |
| Dollars                       |          |          |         |         |         | -268      | 108       | -17       | -7          | -1,243      | 62        |
| Percentage                    |          |          |         |         |         | -20%      | 8%        | -1%       | -1%         | -91%        | 5%        |

The FY 2000 House Energy Conservation numbers have been adjusted to compensate for the House's proposed shifts of programs between Conservation and Fossil Energy, so that the numbers are comparable to FY99, the FY00 request, and FY00 Senate.

In FY 1999, the difference between "Conference" and "omnibus" represents what was gained in the "end game."

1/24/00

Climate Change-Related Funding  
FY 2001 Budget  
(\$'s in millions)

|                                                 | FY 2000<br>Enacted | <del>FY 2000<br/>Budget</del><br>FY 2001<br>Proposed | Change |
|-------------------------------------------------|--------------------|------------------------------------------------------|--------|
| Climate Change Technology Initiative            | 1,099              | 1,366                                                | +534   |
| – Spending                                      | 1,099              | 1,432                                                | +333   |
| – Tax Incentives                                | —                  | 201                                                  | +201   |
| Clean Energy Initiative                         | 294                | 491                                                  | +197   |
| – International                                 | 98                 | 202                                                  | +104   |
| – Bioenergy/Bioproductions*                     | 196                | [ ] 289                                              | + 93   |
| Global Change Research Program                  | 1,701              | 1,772                                                | + 39   |
| Clean Air Partnership Fund                      | 0                  | 85                                                   | + 85   |
| Weatherization & State Energy Grants            | 169                | 191                                                  | + 22   |
| Partnership for a New Generation of<br>Vehicles | 226                | 255                                                  | + 29   |
| Global Environment Facility 1/                  | 14                 | 68                                                   | + 54   |
| TOTAL 2/                                        | 3,262              | 4,089                                                | +827   |

1/ Adjusted for climate-only projects.

2/ Total adjusted to eliminate double counts.

\* Does not include CCC \$

Climate Change-Related Funding  
FY 2001 Budget  
(\$'s in millions)

|                                                       | FY 1999<br>Actual | FY 2000<br>Estimate | FY 2001<br>Proposed | Change<br>2000-01 |
|-------------------------------------------------------|-------------------|---------------------|---------------------|-------------------|
| <b>Climate Change Technology Initiative (CCTI)</b>    |                   |                     |                     |                   |
| Department of Energy                                  |                   |                     |                     |                   |
| Solar and Renewable Energy                            | 336               | 315                 | 410                 | 95                |
| Nuclear Energy                                        | 0                 | 5                   | 5                   | 0                 |
| Energy Conservation R&D                               | 526               | 576                 | 660                 | 84                |
| Fossil Energy R&D                                     | 24                | 51                  | 56                  | 5                 |
| Science                                               | 14                | 33                  | 37                  | 4                 |
| Energy Information Agency                             | 3                 | 3                   | 3                   | 0                 |
| Subtotal -- DOE                                       | 902               | 984                 | 1,169               | 185               |
| Environmental Protection Agency                       |                   |                     |                     |                   |
| Environmental Programs and Management                 | 71                | 77                  | 174                 | 97                |
| Science and Technology (transport/PNGV)               | 38                | 26                  | 53                  | 27                |
| Subtotal -- EPA                                       | 109               | 103                 | 227                 | 124               |
| Department of Agriculture                             |                   |                     |                     |                   |
| Agricultural Research Service (biomass)               | 0                 | 0                   | 9                   | 9                 |
| Natural Resources Conservation Service (soil studies) | 0                 | 0                   | 3                   | 3                 |
| Forest Service (biomass & carbon sequestration)       | 0                 | 0                   | 12                  | 12                |
| Subtotal -- USDA                                      | 0                 | 0                   | 24                  | 24                |
| Department of Housing & Urban Development             |                   |                     |                     |                   |
| Research and Technology (PATH)                        | 10                | 10                  | 12                  | 2                 |
| Department of Commerce                                |                   |                     |                     |                   |
| National Institute of Standards and Technology        | 0                 | 2                   | 0                   | -2                |
| Total -- CCTI                                         | 1,021             | 1,099               | 1,432               | 333               |
| <b>Clean Energy Initiative</b>                        |                   |                     |                     |                   |
| International                                         |                   |                     |                     |                   |
| USAID                                                 | 68                | 79                  | 109                 | 30                |
| DOE                                                   | 6                 | 3                   | 52                  | 49                |
| DOC                                                   | 0                 | 0                   | 4                   | 4                 |
| TDA                                                   | 16                | 16                  | 22                  | 6                 |
| EX-IM Bank                                            | 0                 | 0                   | 15                  | 15                |
| Subtotal -- International                             | 91                | 98                  | 202                 | 104               |
| Bioenergy/Bioproducts                                 |                   |                     |                     |                   |
| DOE                                                   | 109               | 125                 | 174                 | 49                |
| USDA                                                  | 76                | 71                  | 115                 | 44                |
| Subtotal -- Bioenergy/Bioproducts                     | 185               | 196                 | 289                 | 93                |
| Total -- Clean Energy                                 | 276               | 294                 | 491                 | 197               |



1/24/00

## Biofuel/Biobased

|                                              | 1993         | 1999         | 2000         | 2001 (Initiative) |             |
|----------------------------------------------|--------------|--------------|--------------|-------------------|-------------|
| <b>DOE</b>                                   |              |              |              |                   |             |
| <b>Office of Industrial Technologies</b>     | <b>8.3</b>   | <b>9.6</b>   | <b>11.0</b>  | <b>43.8</b>       | <b>12.0</b> |
| Forestry                                     | 5.7          | 7.6          | 7.0          | 17.1              | 2.0         |
| Agriculture                                  | 0.0          | 2.0          | 4.0          | 13.0              | 5.0         |
| Crosscutting                                 | 2.6          | 0.0          | 0.0          | 13.7              | 5.0         |
| <b>Office of Power Technologies</b>          | <b>5.1</b>   | <b>30.8</b>  | <b>31.5</b>  | <b>46.0</b>       | <b>11.0</b> |
| <b>Office of Transportation Technologies</b> | <b>36.7</b>  | <b>41.2</b>  | <b>38.9</b>  | <b>54.4</b>       | <b>7.0</b>  |
| <b>Office of Science Technologies</b>        | <b>24.3</b>  | <b>27.2</b>  | <b>29.5</b>  | <b>29.5</b>       |             |
| <b>NETL (Fossil Energy)</b>                  | <b>0.0</b>   | <b>0.0</b>   | <b>14.0</b>  | <b>0.0</b>        |             |
| <b>DOE TOTAL</b>                             | <b>74.4</b>  | <b>108.8</b> | <b>124.9</b> | <b>173.7</b>      | <b>30.0</b> |
| <b>USDA</b>                                  | <b>81</b>    | <b>76</b>    | <b>71</b>    | <b>115</b>        | <b>30</b>   |
| <b>GRAND TOTAL</b>                           | <b>155.4</b> | <b>184.8</b> | <b>195.9</b> | <b>288.7</b>      | <b>60.0</b> |
|                                              |              | 29.4         | 11.1         | 92.8              |             |
|                                              |              |              |              | 133.3             |             |

THE WHITE HOUSE  
WASHINGTON

December 6, 1999

MEMORANDUM FOR JACK LEW  
GENE SPERLING  
SYLVIA MATTHEWS

CC: JOHN PODESTA  
GEORGE FRAMPTON  
NEAL LANE  
MARTIN BAILY  
ELGIE HOLSTEIN  
BOB KYLE

FROM: ROGER BALLENTINE 

SUBJECT: "Clean Energy for the 21<sup>st</sup> Century" -- FY2001 Budget

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During the past several months, the President has repeatedly stressed the need to move beyond the "big idea" of the 20<sup>th</sup> Century -- that economic growth must necessarily be accompanied by increased pollution, including greenhouse gases. Both at home and abroad, there are urgent environmental needs and significant economic opportunities in accelerating the shift to clean and efficient energy technologies and practices. The two priorities of economic growth and a clean environment can and must be achieved together. To fulfill the President's commitment to that vision, we propose for the FY2001 budget this Administration's final major climate change-related initiative -- the "Clean Energy for the 21<sup>st</sup> Century Initiative".

For this initiative, we are requesting a total over-base amount of \$332 million (across eight agencies: DOE, AID, USDA, Treasury, DOC, ExIm, OPIC and TDA) in FY2001 in two components:

- Domestic: promote clean power through implementation of the President's 1999 Bioenergy Executive Order and through cleaner and more efficient power production (\$149 million);
- International: focus on cleaner energy markets in developing countries, drawing on the recommendations of the President's Committee of Advisers on Science and Technology (PCAST) in their June 1999 report to the President (\$183 million).

## SUMMARY: PROPOSED FY2001 BUDGET

|               | 2001 Request<br>(over target) | 2001 Base                                |
|---------------|-------------------------------|------------------------------------------|
| Bioenergy     | \$128                         | \$215.3                                  |
| Clean Air     | \$ 21                         | N/A                                      |
| Global Energy | \$183                         | \$266 (not including<br>DOC, ExIm, OPIC) |
| Total         | \$332                         |                                          |

### I. GLOBAL CLEAN ENERGY IN THE 21<sup>ST</sup> CENTURY

*"I have an obsession... The world is still largely in the grip of a "big idea" that isn't true anymore. And that big idea is that in order for any country that's not rich to get rich, they have to burn more fossil fuels and put more greenhouse gases in the atmosphere, because that's the way we got rich and that's the way the British got rich. And that's not true anymore. The whole economics of energy and the economy have changed. And we could have a revolution in the environment with more trade and investment available for environmental technologies and alternative energy sources... But it won't necessarily happen automatically."*

-- President Clinton. October 14, 1999.

*"We should act expeditiously on PCAST's recommendations ... assess the portfolio of programs underway in the Federal agencies and develop a strategic vision, including budget recommendations that can be considered in agency requests for FY2001".*

-- President Clinton in a letter to Neal Lane, September 15, 1999.

This proposed international trade and environment initiative will accelerate the development and deployment of clean energy technologies for electric power in developing countries. The initiative is built on the PCAST "Powerful Partnerships" report and the work of the National Science and Technology Council working group. The goal is to increase and "green" U.S. private capital flows and exports to the developing world in electric power production and consumption infrastructure and products.

Electric power alone is now responsible for one third of global greenhouse gas emissions, with the fastest growth coming from developing nations. "Business as usual" expansion of electric power supply in developing countries is estimated to triple their emissions of CO<sub>2</sub> over 1995 levels by 2020 -- and lead to significant increases in local air pollution from sulfur oxides, nitrogen oxides and particulate matter.

At the same time, the trade and investment opportunities for U.S. companies in this growing market offer important advantages to U.S. workers and technology innovators. Between 1995 and 2020, \$1.7 trillion will be invested in electric power capacity in developing countries. American companies are highly competitive in the global power market and are well positioned to lead the way to a cleaner energy future. As the PCAST report pointed out, however, we stand to lose market share to our trade competitors unless we fashion a more effective and robust USG-private sector partnership to address the challenge of global clean energy markets.

The international component of the Clean Energy for the 21<sup>st</sup> Century Initiative has three related pieces:

A. Coordination of Existing Programs.

Drawing on the recommendations of the PCAST report, the Clean Energy Initiative will enhance coordination of relevant agency programs at DOE, USAID, TDA, EXIM, OPIC, Commerce. Greater coordination of these programs and budgets will be achieved through an Executive Order directing the Secretaries of Commerce, Energy and the USAID Administrator, working through the Environmental Trade Working Group, to establish a focussed coordination mechanism and senior responsible personnel in each key agency. This coordination will assure that the full spectrum of USG support for clean energy technology – from DOE’s technology programs, to USAID’s policy and capacity building work in the field, to trade promotion programs at TDA, OPIC and EXIM – is harnessed to the goals of this initiative (*No FY2001 budgetary impact*).

B. Additional Funding and New Export Promotion Programs.

The recommendations for additional funding of existing and new programs included in this Initiative fall into three categories:

1. Clean electric power generation and use technology demonstration and R&D. The new R&D and demonstration funding will focus on large grid power systems (advanced coal, nuclear, natural gas and wind/biomass), as well as distributed generation technologies, including renewable energy. Included also are demonstration projects that prove the reliability, feasibility and desirability of cleaner power production technologies, as well as design and production techniques that save energy. (*Requested FY2001 funding: \$93 million*).
2. Policy reform and capacity building. Policy reform and capacity building includes existing programs by DOE and USAID in key developing countries to “open markets” for cleaner energy infrastructure and create greater demand for low-carbon options. Examples of policy reform include efforts involving electric industry restructuring, specification reform in proposal requests, and elimination of fossil fuel subsidies. (*Requested FY2001 funding: \$33 million*).

3. Clean energy trade promotion and finance. For export promotion and finance, the goal is to target existing and propose new USG trade promotion programs to make greater levels of investment possible. For example, we propose cost-shared clean power feasibility studies at TDA, new bid-cost insurance at TDA (small U.S. exporters often decline to bid on projects due to the costs of the bid process), expanded utilization of ExIm's "Environmental Export Program", similar dedicated funds at OPIC, and a new EXIM pilot program to provide limited currency exchange risk insurance for exporters of clean energy technologies. *(Requested FY2001 funding: \$57 million).*

#### C. Multilateral Clean Energy Trade Diplomacy.

"Greening" global capital flows to provide cleaner energy infrastructure will require the United States to play an active international leadership role. The U.S. led the successful effort to put export credit agency environmental guidelines on the Cologne G8 agenda and has been the most vocal proponent of changes in World Bank policies on energy and environment lending practices. The success of our bilateral efforts will require continued leadership within the OECD, G8 and WTO venues to establish common principles and favorable terms for clean energy technologies in ECA guidelines and through WTO policies. (e.g. longer/more favorable OECD lending terms for clean energy projects; liberalization of trade in environment and energy services; removal of fossil fuel subsidies). *(No FY2001 budgetary impact).*

*[A summary table of the request for the Global Clean Energy Initiative is attached]*

## II. **CLEAN ENERGY AT HOME IN THE 21<sup>ST</sup> CENTURY**

The domestic piece of the initiative contains two components – 1) fulfillment of the President's new Executive Order establishing a national goal of tripling U.S. use of bio-based products and bioenergy; and 2) a new effort to accelerate the conversion of dirtier, older power plants to cleaner, more efficient technologies.

#### A. Bioenergy – Clean Fuel For The 21<sup>st</sup> Century

In August of this year, the President signed an Executive Order and Memorandum committing to triple use of bioenergy and bio-based products in the US by 2010. Meeting the goal will spur rural economies, seize world leadership in new biological technologies, reduce our dependence on foreign oil supplies, improve our environment, and enhance forest and agricultural productivity. To meet the President's goal, we must reduce the costs of converting sustainable raw materials – crops, trees, and biological wastes – into fuels, electric power, chemicals, and building materials and consumer goods.

As directed by the President, the Secretaries of Energy and Agriculture have developed a coordinated research and development plan to accomplish that goal. The plan accelerates and coordinates existing government and industry research and development efforts at the two Departments. *The two departments currently spend \$215.3 million, and we propose a 60% increase in funding of \$123.5 million.*

The fundamental obstacle to meeting the President's goal is to lower the cost of bioenergy to allow it to compete and win in the marketplace with fossil-based fuels. The plan would meet specific cost-lowering goals by 2010 rather than 2015 or 2020 as called for under current spending. The bioenergy plan tackles three fundamental cost-lowering opportunities and technical challenges to meet the President's goal. It reduces the cost of: 1) biomass feedstock itself; 2) converting feedstock to electricity, chemicals, ethanol, and building products; and 3) developing biobased products and energy. In each of these three areas -- feedstocks, conversion, and products -- DOE and USDA will develop the science and technology base to support the President's goal, facilitate commercial deployment of the biotechnologies, analyze the results, and conduct education and outreach.

|            | DOE<br>Base | USDA<br>Base | DOE<br>New | USDA<br>New |
|------------|-------------|--------------|------------|-------------|
| Feedstocks | 34.1        | 61.7         | 5.0        | 31.9        |
| Conversion | 112.7       | 14.3         | 48.0       | 19.7        |
| Products   | 3.5         | 16.1         | 0          | 23.4        |
| Totals     | 150.3       | 92.1         | 53.0       | 75.0        |

#### B. Clean Power Plants For The 21<sup>st</sup> Century

Electricity generation is the largest source of air pollution in the U.S., releasing more than two thirds of the nation's sulfur dioxide, and approximately one third of carbon dioxide, nitrogen oxides, and mercury. These pollutants contribute to disease and premature death from smog, soot, and toxic air pollution, worsened visibility in national parks, acid rain and water pollution. Power plants are also the largest contributor to greenhouse gas concentrations and global warming. Many of these emissions come from the 70% of U.S. power plants that are more than 30 years old, and which are specifically exempted from clean air rules requiring the cleanest technology. These plants can emit air pollution at four to ten times the rate of new, clean facilities.

The electric utility industry is going through a period of dramatic change as more than twenty states have adopted legislation to restructure the industry, and Congress is considering legislation as well. Many industry leaders have been seeking certainty for clean air requirements while they enter the uncertain world of a deregulated marketplace.

Any steps with respect to environmental requirements should be viewed against the backdrop of a changing marketplace, and in conjunction with the Administration's own strong support for utility restructuring and the \$20 billion in consumer savings that would result.

The President would propose a significant additional effort to clean up and modernize these power plants. The plan should include two key elements:

1. Clean Air Act Reinvention.

In the State of the Union, the President should announce his intention to submit a bold, new legislative proposal to mandate pollutant reductions over the next 15 years through market-based emissions trading. It should also eliminate counter-productive regulatory barriers. The proposal would give industry regulatory certainty over the next 15 years, and deliver cleaner air for Americans to breathe (*No budgetary impact for FY2001*).

2. The Clean Air Bond.

While legislative changes would lay out a new landscape for power production in the U.S., we can help bring about important improvements in the short term. The budget should include a new financial incentive for the utility industry to accelerate the conversion of today's older, dirtier power plants to clean, more efficient power production: the Clean Air Bond.

We propose to amend the tax code to create a special class of tax exempt "private activity bonds" to finance qualified clean energy technology investments (similar to pre-1986 state and municipal "pollution control bonds"). This version of the Clean Air Bond would require competitive bids from qualifying entities, with the tax-exempt capital going to those demonstrating the greatest environmental benefit at least cost. Based on Joint Tax Committee scoring in 1998 of private activity bonds, it is estimated that \$523 million in lost revenues to the Treasury over five years would leverage \$15 billion in bond issues (\$3 billion per year over the years 2001-2006). Treasury has not reviewed this proposal in detail.

Millions in Dollars

| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | TOTAL  |
|--------|--------|--------|--------|--------|--------|
| 20.88  | 63.36  | 107.64 | 147.60 | 183.06 | 523.44 |

## GLOBAL CLEAN ENERGY – SUMMARY TABLE

|                                                   | PRINCIPAL ACTIVITIES*                                                                                                                                                                                                                                         | PCAST Target | Over-target Request FY2001 |
|---------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|----------------------------|
| <b>Clean Power: Fossil</b>                        | Powerplant improvements<br>Combined Heat and Power<br>Fuel Cells<br>Advanced Coal/Hydrogen production and use<br>Methane Leakage Reduction/Recovery<br>Sequestration<br>Policy support for gas grid development; data/analysis                                | 35           | 32                         |
| <b>: Nuclear</b>                                  | International NERI<br>Reactor Safety                                                                                                                                                                                                                          | 10           | 8                          |
| <b>: Renewables</b>                               | Resource Assessment<br>Grid-Systems with biomass, PV, wind<br>Off Grid/Mini-Grid systems with biomass, PV, wind                                                                                                                                               | 40           | 32                         |
| <b>: Building Efficiency</b>                      | Energy Efficient Buildings. Appliances, Stoves                                                                                                                                                                                                                | 20           | 19                         |
| <b>: Industry Efficiency</b>                      | Energy Efficient Industry Best Practices                                                                                                                                                                                                                      | 10           | 6                          |
| <b>Energy Sector Reform and Capacity Building</b> | Power Sector Restructuring/Policy Reform:<br>Regional Energy Innovation Networks:<br>Institution Building                                                                                                                                                     | 35           | 33                         |
| <b>Trade Promotion and Finance</b>                | Technical Assessments:<br>Feasibility Studies<br>Partial Grant Loan Guarantee Mechanism<br>MDB Technical/Financial Assistance<br>International Market Development<br>ExIm Exchange Risk Assistance Fund<br>Revolving Fund: small business project development | 80           | 53                         |
| <b>Other</b>                                      |                                                                                                                                                                                                                                                               | 20           | 0                          |
| <b>TOTAL</b>                                      |                                                                                                                                                                                                                                                               | 250          | \$183                      |

| AGENCY | Domestic FY2000 Base | International FY2000 Base | International In-Guidance Request FY2001 | International Over-Target Request FY2001 |
|--------|----------------------|---------------------------|------------------------------------------|------------------------------------------|
| DOE    | ~800+                | ~25                       | ~32                                      | 72                                       |
| USAID  | NA                   | ~225                      | ~225**                                   | 67.5                                     |
| DOC    |                      |                           |                                          | 8                                        |
| Ex-Im  | NA                   | NA                        | NA                                       | 15                                       |
| OPIC   | NA                   | NA                        | NA                                       | 3.5                                      |
| TDA    | NA                   | 15.7***                   | 19.25                                    | 17                                       |

\*NA—Not Applicable

\*\*FY2000

\*\*\*FY1999